Managing Convicts, Understanding Criminals: Medicine and the Development of English Convict Prisons, c.1837–1886

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Submitted in accordance with the requirements for the degree of
Doctor of Philosophy

The University of Leeds
School of Philosophy, Religion and History of Science

July 2017

The candidate confirms that the work submitted is her own and that appropriate credit has been given where reference has been made to the work of others.

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Acknowledgements

I would like to thank my supervisors, Jon Topham and Mike Finn, for all their help. They have encouraged me, talked through ideas, and read almost everything I have written, no matter what state it was in at the time. Without them this thesis would definitely not exist. I would like to extend that thanks to Claire Jones who supervised the first year of this project, and to all my family, friends, and colleagues who have given me feedback on my work, in particular those who helped with the final read-throughs.

My thanks to all the staff in HPS at Leeds; they have got me through three degrees and kept me passionate about the subject throughout! I will always be grateful for their guidance, teaching, feedback and friendliness. A special mention should go to Louise Hawksworth for solving every problem I have ever thrown at her. Further thanks also to Mike Finn, Claire Jones and the members of the Museum of History of Science, Technology and Medicine for hours of 'productive procrastination' and the opportunity to learn about all aspects of museum practice and HPS through material culture.

Thanks also to friends dotted around the country. In particular, I would like to thank three groups of people. First, the Welwyn Garden City lot for continuing years of pub trips and being a welcome reminder that life exists outside universities. Second, my friends from Engineering at the University of Leeds for humouring me when I talked about things in jars or body parts. Third, to HPS and Philosophy at Leeds past and present for a total of eight wonderful years. Special thanks to Sarah Adams, Dani Adams, Caz Avery, Alex Aylward, Richard Bellis, Becky Bowd, Marc Cole, Paul Coleman, Anne Hanley, Emily Herring, Matt Holmes, Kevin Jones, Konstantin Kiprijanov, Lewis Hickley, Jade Fletcher, Coreen McGuire, Polina Merkulova, Alice Murphy, Clare O'Reilly, and Kiara White.

My eternal love and gratitude go to my Mum and Dad, Wendy and Dale, for their unending love, support, reassurance, financing and proof-reading. Love and thanks also to my grandparents Daphne, Allan, Ann and Winston; my siblings, Richard, Hatti and Lizzie; and the extended Sellers, McCanna and Chilton clans. Many of these people were not always sure quite what I, or my partner Stephen Chilton, have been doing whilst writing our theses, but have supported us whole-heartedly anyway. Finally, my thanks and my love go to my partner, Steve. Not least for putting up with me throughout.

Abstract

This thesis argues that the creation and development of the English convict prison system during the nineteenth century depended to a significant extent on the medical men who were employed there. It focuses on the practical work-lives and research of prison medical officers in five Victorian government-run convict prisons. The structure is both chronological and thematic: each chapter focuses on a specific convict prison and on particular concerns of prison medical officers and administration at a time when new challenges arose.

The thesis demonstrates that prison medical officers changed the architecture, management, and philosophy that shaped the developing prison system, in what was an experimental era for prisons. At the start of the nineteenth century England had a medley of regional systems, different types of prisons and inconsistent punishments; by the end, a more uniform, organised, national system had been formed through experiment and policy change. Prison medical officers played a vital part in this transformation, and they thereby shaped the British understanding of "the criminal" in the decades before the advent of criminology.

The intention to build a uniform system had to be rethought because of physical and mental health diagnoses made by the medical staff. The separation and categorisation of people within, based on medical concerns, shaped both convict prisons and the British understanding of "the criminal". The thesis also argues that studying medicine in prisons illuminates the history of medicine, giving a new insight into how this group of medical men came to do important work in epidemiology, nutrition, psychiatry, neurology and public health.

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Abbreviations

BAAS	British Association for the Advancement of Science.
JMS	*Journal of Mental Science.*
BMJ	*British Medical Journal.*
HO	Home Office.
LSA	Licence of the Society of Apothecaries.
LRAB	Lunacy: Report on Accommodation at Broadmoor Asylum and the Question of Removing Lunatic Convicts from Woking.
ODNB	*Oxford Dictionary of National Biography [Online]* 2004–2017. (Oxford University Press).
OED	*Online English Dictionary [Online]* 1986–2017. (Oxford University Press).
PCOM	(The) Prison Commission.
PMO	Prison Medical Officer.
PMS	Prison Medical Service.
PP	Parliamentary Papers.
RCP	Royal College of Physicians.
RCS	Royal College of Surgeons.
RDCP	Reports of the Directors of Convict Prisons.
SHC	Surrey History Centre.
TNA	The National Archives.
WRHC	West Riding House of Correction.
WYAS	West Yorkshire Archive Service.

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Introduction.
Convict Prisons and Medical Practice

...the results of such a national experiment, - an experiment which has now ranged... over a body of from three to four thousand convicts – can hardly fail to supply some important data for a solution of the perplexing problem of secondary punishment.[1]

I. Introduction: Medicine and the English Convict Prisons

The knowledge "that the English prison system is one of the best in the world has long been commonplace among scientific penologists", claimed an American professor of sociology, Charles Ellwood, in 1916.[2] He argued, "Great Britain has the most law-abiding population of any great nation of the civilized world", continuing, "[t]he astonishingly low rate of serious crime among its 40,000,000 people is hardly credible when we compare it with even the most advanced States in America."[3] Ellwood saw in prison population statistics that from 1884 to 1916 there was a decline in penal servitude sentences, arguing that, "after making due allowance for the improvement of social and economic conditions, the evidence is strong that the English prison system itself has much to do with the gradual diminution of crime in England."[4] The Victorians who created and developed the prison system Ellwood was so positive about would have been absolutely thrilled, although some might have been a little incredulous. The English prison system in 1916 was not quite the one of effective, scientific, organised, uniform, productive perfection implied by Ellwood's article. Nevertheless, much had been done through experiment to improve the system since the opening of the first convict prison in London a hundred years earlier, in 1816.

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[1] Burt 1852: vi.
[2] Ellwood 1916: 22.
[3] *Ibid*: 22.
[4] *Ibid*: 24.

The modern English penal system was created and developed in the nineteenth century, and his thesis explores the previously neglected role of medical practitioners in this experimental era of the English convict prison service. While many different individuals were involved and impacted on the changing prison service, it was medical men who most significantly impacted on the development of convict prisons in nineteenth-century England: medicine, I will argue, played a dominant role in shaping prison management, policy and philosophy. The Victorians sought to create a uniform system of punishment, but found they needed new types of convict prisons to deal with specific types of people and their health problems. Pragmatic debates about how to treat criminals led to new understandings of criminality that could not have been achieved through theoretical discourse alone. Consequently, the story of nineteenth-century prison management and development should not be told simply as a history of legislative changes, but one of experiment. This thesis presents a history that focuses not on power struggles, but on balancing the health of convicts with penal policy. I am not an apologist for prisons, neither am I lamenting their failings. Rather, I seek to recover what the people who worked in prisons thought and did, and what the consequences of their actions were. Whereas most recent histories of prison medicine draw on Foucault and present stories of control through medical knowledge, this thesis instead argues that although medicine could be used for control over prisoners, medical practice, genuine research and experiment were fundamental factors in the directions the development of the prisons took. Medicine was not merely incidental.[5]

The following sections of this introduction outline the three key themes addressed in this thesis. Firstly, prisons were a place for incarceration but also for experiment and research. Secondly, medical practice in prisons was both a key element of prison development and contributed to mainstream medicine. And thirdly, theories and knowledge about criminals as individuals and as a class were developed in prisons through practical necessity. This thesis thus brings together historical narratives concerning prisons and medicine by exploring important collections of primary sources that have been previously neglected. These sources allow us to develop richer historical narratives about prison development, and answer key questions. How did prison medicine change British prisons? Who, precisely, was practising in prisons, and how did their work contribute to medicine more generally? And, what role did prisons play in the development of the field of criminology?

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[5] For examples of prison histories that emphasis power in some form see McConville 1981; Cohen and Scull 1983; Garland 1985; Dobash *et al.* 1986; Sim 1990; Priestley 1999; Breathnach 2015.

The following sections of this introduction take these themes in turn. Section II begins by outlining the standard prison narratives as told by historians in the last 100 years. Section III then critiques the existing historiography of Victorian prisons and demonstrates that the Victorian convict prisons were far more changeable and varied than current narratives suggest.[6] It is highlighted in these sections where this thesis will diverge from that established story of prison history. Section IV then introduces the subject of prison medicine, which has largely been missing from historical scholarship. I argue that it was medical practice and research in the prisons that shaped the management and day-to-day activities of convicts and staff alike, driving the experimental era in prisons and all the changes that it encompassed. This thesis tells the stories of some of the medical men working in convict prisons and links their experimental work with the developing prison service described in sections II and III. Section V then introduces emerging Victorian understandings of criminality: who criminals were, how they acted, and how they should be treated. This topic has hitherto been intertwined with the unhelpful notion of "pre-criminology", a confusing epithet which has hidden the origins of British criminal theories.[7] I argue that many of the nineteenth-century classifications, labels and tropes associated with criminals were formed in the convict prisons. It was through practical necessity that PMOs defined, and sub-defined, criminals. Section VI explains the methodological choices made in this thesis, the sources used and the limitations of the archives. Finally, section VII outlines the structure of this thesis and introduces the convict prisons that will be discussed here in. Prisons which epitomised the above themes and exemplify particular medical problems in the prisons.

II. Prisons: Standard Narratives and Radical Orthodoxies

It is important before continuing to clarify some terminology. Most historians use the word "prison" to refer to convict and local prisons collectively. In the eighteenth and nineteenth centuries, the various terms for places of punishment could be, and were, used interchangeably, even though they had specific definitions. Prison is a now generic term which in Britain has come to refer to institutions based on British nineteenth-century

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[6] Prison histories include Webb and Webb 1922; Radzowitz 1948; Morris and Morris 1963; Burn 1965; Stockdale 1977; Foucault 1978; Ignatieff 1987, 1981; McConville 1981, 1998; Saunders 1983; Morris and Rothman ; Forsythe ; Garland 1985; Priestley 1999; Brodie *et al.* 2002; Hardman 2002.

[7] Hurowitz *et al.* 1983; Garland 1985; Rock 1988, 1994; Davie 2005; Knepper and Johansen 2016.

convict prisons or houses of correction. The terms have been used inconsistently by past administrators and subsequent historians, and differ in Britain and America.[8]

Gaols (or jails) are the oldest types of prisons in Britain. They were local prisons where the gaoler ran the site on behalf of the local community. He (for it was always a he) was appointed by the borough, but acting according to his own terms. Gaols had multiple purposes and housed all types of people of all ages and both genders, accused of all types of crime. In the eighteenth century gaols were mostly just holding houses for those awaiting trial—somewhere to put someone who was a public nuisance or drunkard, or a place to hold people before their punishment proper was carried out. For the purposes of this thesis, "gaol" refers to privately run institutions.[9] In the nineteenth century, local prisons managed by, or on behalf of, local boroughs and councils took over the running of gaols ending the private businesses.

Those in local prisons were usually there for only a brief time, but some stayed for up to two years in a large local prison run by the county as agreed by the state. These offered longer punishment in an attempt to deter idleness and vagrancy and were managed by the county justices.[10] Some large local prisons became part of the convict prison system in the nineteenth century and were overseen by the government when it started to rent cells from the local prisons.

"Convict prisons" (also known as "penitentiaries" or "houses of correction") and prison "hulks" were government-managed places of punishment. Confusingly, gaols, local prisons, bridewells, convict prisons, and hulks were all often simply referred to as "prisons".[11] In this thesis "prison" specifically refers to convict prisons. The convict prisons were for those with sentences of over three years, although most convicts had sentences of five, seven, ten or twenty years. The convict prisons were overseen through the Home Office (HO) and the Prison Directors. Some convict prisons were referred to as convict centres from the 1840s, meaning that they held convicts but not for the full period of their sentence; often it was just for the periods at the begging or end of the sentence, or the period before moving onto a convict works prison. "Convict works prisons" where places were convicts did productive work for society, such as road or bridge building, and

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[8] McConville 1998: 117.

[9] Some local prisons or reformatory centres were referred to as Bridewells.

[10] McConville 1998: 119.

[11] The hulks were ex-military ships which were converted into convict prisons to hold prisoners before they were transported, although some convicts ended up spending their entire sentence in a hulk.

in groups, rather than being in full separate confinement all day and doing work that was either pointless or just to earn the cost of their keep.

Many histories have wrongly suggested that there was a cohesive prison system in Britain throughout the course of the nineteenth century, over-simplifying the different types of prisons a criminal could be sent to on British soil.[12] Most commonly, historians have confused convict prisons with local prisons, assuming there were just "prisons", but the two groups were managed very differently. The local and convict prisons operated almost independently until 1877-8, when they were brought together under one management scheme headed by the government. Although each institution still held different types of criminal with different sentence types, the management system and penal philosophy became, at least theoretically, uniform.

This thesis focuses on the convict prisons of England, as there is not space to discuss the whole system. But more importantly for this study, it was in the convict prisons that there was experimental practice and an attempt to create uniform architecture, management, philosophy and punishment. Though in practice each individual prison differed according to its location, type and staff (and even more so in local prisons, which could vary widely from place to place). Convict prisons were intended to be as uniform as possible across the country but this thesis shows that such uniformity did not emerge from the beginning as intended by prison authorities such as Joshua Jebb, but was something that developed slowly, and the aspiration was sometimes abandoned by the authorities. There have been fewer histories of prisons than might be expected. Those that do exist fall generally into one of three camps: Whiggish or progressivist histories, Marxist and Foucauldian inspired histories, and a few sociological surveys. Among the first Whiggish histories of English prisons was Sidney and Beatrice Webb's 1922 *English Prisons under Local Government,* which told the story of "the transformation of the gaoler or master from an independent profit-maker into a salaried servant of the public authority."[13] The Webbs presented a neat and progressive history which grew out of nineteenth century movements that believed in progress and moral improvement in Britain, and their views were mirrored by later historians in the early-to-mid twentieth century.[14] Their narrative was socialist, arguing

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[12] Morris and Rothman 1998: vii; This has not been aided by a plethora of popular histories of individual prisons which have offered a neo-Foucauldian narrative.

[13] Webb and Webb 1922: 33.

[14] Nineteenth century prison reformers and enlightenment theorists like John Howard, Cesare Beccaria, Jeremy Bentham, Elizabeth Fry and Sir George Onesiphorus Paul all believed that the nineteenth century prisons were an improvement on the eighteenth century system of punishment. They believed that progress was possible through moral reform. Their beliefs were reflected in the

that the horrific justice system of the eighteenth century was replaced by an enlightened one thanks to the work of progressive reformers.[15] The Webbs' account is notable for being the first history of penal administration which addressed the matter on a national and local scale. Responding to their work in 1948 Leon Radzinowicz, argued that nineteenth-century changes to the prison system were less about enlightenment than the Webbs had suggested. Instead, he saw the changes as recognition by legal authorities that the eighteenth-century penal system, based on capital punishment, had not fulfilled its goal as a deterrent.[16] His narrative was more complex, but still nonetheless still argued for an overall progressive account of the history of prisons.

As Philippa Hardman has argued, in the 1960s there was a resurgence in penal history and a new wave of revisionist and Marxist historians turned their attention to prison systems.[17] In an era of social upheaval and political campaigning, new generations questioned the orthodoxies and ideas inherited from the nineteenth century. Just as the traditional treatment of mental health was questioned by the anti-psychiatry movement, and feminist writers challenged the sexism and inequality inherent in society, so the Victorian system of prison management was critiqued by historians.[18] The early Marxist historians set about explaining the contemporary prison system in terms of its history, focusing particularly on class struggles and economics. They were more sceptical than those who had followed the Webbs' line of argument and attempted to put state institutions, including the asylums, prisons, and workhouses, into broader social contexts.[19]

Like the progressivist historians, they saw the end of the eighteenth century as a turning point in penal history, but instead of it being a move towards enlightenment, they examined the consequences of the industrial revolution and class conflict.[20] In 1963,

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Webbs' work and later by other Webb-whig historians like Burn 1965, Whiting 1975, Cooper 1976 and Henriques 1979. Whig histories are really found from the 1980s when Foucault and Marx dominated historical thought. See Hardman 2007: 7–20 for a more detailed historiography.

[15] Webb and Webb 1922.

[16] Radzowitz 1948.

[17] Hardman 2007: 13–15.

[18] Examples of the anti-psychiatry movement can be seen in the work of Szasz 1960; Laing 1960; Foucault 1961; Goffman 1961. See Betty Friedan's 1963 *Feminine Mystique* as an example of the feminist movement. For examples of politicised prison histories see Burn 1965; Whiting 1975; Cooper 1976; Stockdale 1977; Foucault 1978; Henriques 1979.

[19] Rodman 1968; Morgan 1977; Ignatieff 1978.

[20] Ignatieff 1978; Hardman 2007, has argued that there is a much longer history of prisons stretching back to the sixteenth century which should be taken into consideration. She argues there was less of a change in the eighteenth century, and consequently nineteenth century than has previously been thought. Her research showed the discussions about institutionalised labour stretch back to the sixteenth century and emerged re-emerged in the eighteenth century because of the language being used to discuss penal reform.

Morris and Morris undertook a "sociological study" of Pentonville Prison; describing it as "a total institution".[21] Their study looked at Pentonville in the early 1960s but reflected on its past. Pre-empting the work of Michel Foucault's on power struggles, they described Pentonville as "both an institution of social control and a symbol of legitimate coercion on the part of the state".[22]

Whiggish histories of prisons like that of the Webbs were the main target for Foucault in his seminal 1975 book *Discipline and Punish: The Birth of the Prison*. Foucault's sociological analysis was implicitly Marxist in character, and although it drew only on poorly researched histories of prisons, primarily in France, it was able to offer a radical reinterpretation of the history and social theory of prisons. Although Foucault's history was factually inaccurate, he argued strongly that the new prisons of the nineteenth century were not reforming, humanitarian institutions, but places where punishment and discipline were used to control and shape the politics and economy of both the individual and the collective. For Foucault, the new penitentiaries were the result of political power struggles in the nineteenth century. The prisons, and the separate system − the managerial scheme which dominated the convict prisons and involved keeping convicts away from each other and performing hard labour − slowly but surely instituted power and control over individuals, shaping them to fit social norms and reinforcing their place in the bottom of the social and political hierarchy.[23] "Punishment becomes not a detour on the historical landscape" argued Morris and Rothman, "but a critical element in evaluating the exercise of authority."[24]

Drawing on broad concepts of power from both Marxist writings and Foucault, prominent texts on the history of prisons were written by Michael Ignatieff and David Garland who both argued that British prisons were based on hierarchical power relations.[25] They both saw the prisons as repressive tools used by the state to control the poor or the deviant. While Ignatieff's work was more perhaps Marxist than Foucauldian, Garland was explicit in his Foucauldian inspiration. Ignatieff highlighted prisons as part of a Marxist story in the development of capitalism where the prisons became "total institutions".[26] Adopting

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[21] Morris and Morris 1963. The term "total institution" came from Erving Goffman's 1961 book *Asylums: Essays on the Social Situation of Mental Patients and other Inmates*.

[22] Morris and Morris 1963: 1.

[23] Foucault 1978.

[24] Morris and Rothman 1998: viii.

[25] Ignatieff 1978; Garland 1985.

[26] Ignatieff 1978: xiii. Goffman's concept of the total institution was quickly taken up by others from the anti-psychiatry movement like Foucault 1961, Laing 1960 and Szasz 1960, and applied

the language of class warfare he argued that penal administrators and governing bodies used prisons as tools of suppression suggesting it was fear by the middle classes of the poor which drove the penal system.[27] Garland instead focused on the regulation of social deviants. He suggested that new categories of deviant were identified resulting in the prison, work house and asylum of the nineteenth century.[28] This thesis advances his argument, showing that new categories of criminal within the prisons shaped the development of convict prisons.[29] I reject, however, that this was based on the categorisation of groups of people based on class, and argue the categories that emerged within the prison were pragmatic.

Subsequent scholars have continued to draw on a combination of Marxist and Foucauldian ideas to explain and understand the development of prisons.[30] The history of prisons typically presented is either a history of power struggles between staff and administrators on the one hand and convicts on the other, or a history of key legislation. McConville, for example emphasises administrators and the power they had to push their own agendas and penal ideologies, Joshua Jebb being a prime example of this.[31] His work focuses on administrators, staff, government and policy, asking what prison staff and administrators thought was the purpose of imprisonment and how this impacted on prison development. McConville's work says very little about prisoners themselves. More recently, Alison Brown extended Foucault's thesis to explore the position and reaction of prisoners in instances when disturbances or riots erupted, she is interested in collective actions of defiance, something she felt Foucault had neglected.[32] More attention is also being paid to the experience of individual prisoners or groups of prisoners, such as women and juveniles particularly following Roy Porter's 1985 call for patient views in history of

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consequently by others such as Foucault 1978 and Ignatieff 1981 to other state institutions such as the prisons.

[27] Ignatieff 1978. In 1983, Ignatieff reduced some of the intensity of his argument in 'A Just Measure of Pain' writing "the history of the institution between 1780 and 1840 can be described as a passage from squalid neglect to hygienic order… Foucault's work (and my own as well!) remained captive of that Weberian equation of the ancient regime with the customary, the traditional and the particularistic, and of the modern with the rational, the disciplined, the impersonal and the bureaucratic" Ignatieff 1983.

[28] Garland 1985.

[29] Garland 1985: Chapters 3, 4 and 5.

[30] McConville 1981; Cohen and Scull 1983; Garland 1990; Dobash *et al.* 1986; Sim 1990; Priestley 1999; Brown 2003.

[31] McConville 1981.

[32] Brown 2003.

medicine.[33] Prison history has become part of a broader history of crime, with the emphasis on criminals and their experience. It is, of course, important that the convicts' stories are told, but that is not the aim of this thesis.

There has been, therefore, a move away from the ostensibly over-theorised histories presented by Marxists and Foucauldian writers.[34] Forsythe, for example, countered Foucault and Ignatieff in 1987 arguing that the completely damning picture of the Victorian penal system in overly harsh and simplistic. Instead he sees some of the people working in prisons, in particular prison chaplains, inspectors and reformers as in need of rescuing from condemning historians. He emphasised the policies and decisions made to reform criminals were made in the good faith that they could be reintegrate into their communities.[35] Work has been done by the likes of Sean McConville, Leon Radzinowicz, and Roger Hood and Victor Bailey on individual administrators and their intentions in relation to the prisons they created and developed. Janet Saunders' 1983 PhD thesis has shown Historians need to re-think prison history, looking more closely at day-to-day practice, and the assumptions and experiments that changed policy in the prisons in addition to the work done by administrators.[36] This thesis focuses on the decisions made, primarily by medical men, which affected how the prisons developed and by extension the type of incarceration the convicts experienced.

III. Prisons: Reinterpreting Prison History in the Experimental Era

In so far that there was a turning point in British prison history, it did not come at the end of the eighteenth century but around 1837 when the modern convict prison experiment started in earnest. I have characterised the period between 1837 and 1886 as the "experimental era": a period which did not begin or end with specific legislation, but rather with particular individuals and specific places. During this period the government, prison staff, medical men, statisticians, legal experts, police, reformers and others tried to define

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[33] Porter 1985. Examples of attention being turned towards prisoners experience and groups of under-represented prisoners such as women and children include Priestley 1999; Zedner 1991; Bosworth 2000; Shore 2002; Davie 2010; Horn 2010; Schwan 2014; Johnston 2015; Williams 2016a; Johnston *et al.* 2016.

[34] Janet Saunders for example argued in 1983 that there was an over emphasis on "social-control" in the history prisons, asylums and workhouses.

[35] Forsythe 1987.

[36] Saunders' thesis was a study of the inmates of Warwick's prisons, asylums, workhouses and reformatories. The convict prison in Warwick did not open until 1861 and Saunders has done a comprehensive study of the prison population and the attitudes towards insanity and deviance there.

what the prisons should do, how they should look and how they should be managed. I argue that, through a series of experiments in convict prisons, they created the modern penal system. Nineteenth century prisons diversified and changed from an intended norm despite administrative efforts that they should be uniform. This resulted in a variety of approaches, which made them into an uneasy system. This is still problematic for penal governors and legislators who to expect to find a complete and uniform prison system, but inherited variety in architecture, prison categorisation and prison policy from the nineteenth century. The architecture and philosophies created in the nineteenth century are still with us.

This thesis focuses on "mundane" activities which have been neglected by big picture historians. The period from 1837 to c.1886 was an experimental era for prisons and prison medicine in England when convict prisons were a tentative trial for what prisons could and should be.[37] The convict prisons were seen as an experiment by many Victorians: the assistant chaplain at Pentonville, John Burt, wrote in 1852 that "the results of such a national experiment […] can hardly fail to supply some important data for a solution of the perplexing problem of secondary punishment".[38] This thesis shows that the trial and error which took place within convict prisons shaped the British penal system. This experimental era was a period of unprecedented change in English prisons and these changes were the result of pragmatic choices made by Prison Medical Officers (PMOs) and administrators. Most choices and experimental trials were, it is clear, attempts to balance the competing aims of reforming and punishing individuals. Yet, the deciding factor in a policy change was often not an emphasis on one or other of these aims, but the need to care for and preserve the health of convicts. Health, I argue, was the primary (although not the only) motivator for change in existing English convict prisons and the development of new prisons in the nineteenth century. What follows, then, is the standard narrative reinterpreted without a Foucauldian or Marxist lens. Rather, this thesis focuses on the "mundane" activities which have been too often neglected by 'big picture' historians. But first, an understanding of this big picture is a necessary starting point.

As has been outlined by other historians, until the 1840s the so-called "bloody code" dominated English law, meaning that hundreds of crimes resulted in a death sentence from

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[37] Government managed, large scale prisons. Convicts usually spent a considerable amount of time in these prisons rather than a brief stay in a local prison. (See page 6).

[38] Burt 1852: vi.

the courts, although many were commuted to life sentences, transportation or release.[39] Lesser crimes might warrant fines, lashings or a period in a local gaol, the stocks or pillory.[40] The "bloody code" was intended to deter potential criminals in order to protect property rights and maintain social order. By the end of the eighteenth century penal reformers, such as John Howard, Jeremy Bentham, Sir George Onesiphorus and Paul and Elizabeth Fry, believed that gaols should be made into prisons and re-defined as places of punishment through labour, forcing those convicted to contribute to the wider community and improving their character.[41] The reformers may have been seeking social-control, but they did so with high-minded intentions and grand architectural ambitions.[42] A major transition in penal philosophy thus took place at the end of the eighteenth and start of the nineteenth century that has attracted considerable attention from scholars.

In 1816 construction started on Millbank Penitentiary, the first custom-built reformatory prison for government convicts in England.[43] Bentham's design was, for Foucauldians, the epitome of manipulation and surveillance by the state.[44] During the build, it became clear that Bentham's penal philosophy and vision had to be compromised by cost and practical considerations.[45] While the design and implementation of the Benthamite prison was sufficiently successful to provide a model for later prisons, there was from the start a process of adaptation and modification that became typical of the experimental era. Millbank, although based on Bentham's penal ideals, was not a break from the past or a great utilitarian moment.[46] Instead as Wiener argues, Bentham's penal philosophy was more authoritarian than his social and political ones: Bentham saw criminals as different from normal people so needing different rules.[47] Nevertheless, Millbank was built as a practical choice to improve the stock of people being sent to the colonies on transportation ships, improving the British labour force around the world. As Wiener says, "the purely

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[39] Bailey 1981: 18; Hay 1975: 59–63; Saunders 1983; Wade 2009; King 2015.

[40] Hay 1975: 31.

[41] Webb and Webb 1922; Rodman 1968.

[42] Some attempts were made in the late eighteenth century to regulate and build state prisons, such as the 1779 Penitentiary Act. Hardman 2007: 6. A number of different prison designs emerged following the Act. See Evans 1982.

[43] See the appendix for a timeline of key events.

[44] Wiener 1995: 46.

[45] Bentham's penal philosophy was more authoritarian and interventionist, differing from his socio-political philosophy which advocated the greatest happiness principle. Wiener 1995: 45. Forsythe indicates in his 1984 paper that the Benthamite nature of the panopticon is more complex than most historians suggest, Bentham incorporated a number of other people's ideas into his plans including that of John Howard.

[46] Wiener 1995.

[47] *Ibid.*

'rational' and 'scientific' institutions Bentham envisaged were never really realized. Instead… prisons were always shaped more by politics than by science, more by 'sentiment (both tender and harsh) than by impassive rationality."[48] There is a very real risk of characterising the move from the eighteenth century's transportation and hangings to nineteenth-century prisons as simply progressive, as the Webbs did. Regardless of the reason to build it, Millbank proved fundamental in trialling Benthamite architecture and early versions of the separate system combined with religious ideals about reform. The relative success of Millbank meant that new convict prisons and future experiments were built according to the same design and principles.

Figure 0.1 Joshua Jebb
Illustrated London News, 11 July 1863: 36.

There followed a series of what the Victorians saw as mixed successes and failures. The prisons did not work as Bentham or subsequent penal authorities had envisaged. As a result the system had to expand, divide and become more complex. In 1837 the government launched its next major prison experiment, headed by Joshua Jebb of the Royal Engineers (1793–1863, Figure 0.1).[49] Through his role was initially only to supervise the opening of

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[48] *Ibid*: 45.
[49] See *ODNB* 'Jebb, Sir Joshua'.

Parkhurst Juvenile Prison on the Isle of Wight he came to dominate British penal policies until his death. Although Parkhurst was the first experiment of the experimental era, it does not have a dedicated chapter in this thesis because of the inaccessibility of its archives.[50] For now it is sufficient to say that Parkhurst was one of the first instances of youth or childhood being recognised in the public sphere. It is also when "juvenile offenders" became conceptualised as a discrete category.[51]

Jebb's next major project was to oversee the design and construction of Pentonville Prison in Islington. Opening in 1842, Pentonville was *the* "model penitentiary" and was meant to be the last convict prison experiment as Jebb believed the design would not need to be changed again. The prison system evolved over the nineteenth century but the basic design for buildings and the philosophies built into the spaces by Jebb's experiments at Pentonville remained, shaping conceptions of prisons and their inhabitants to this day. In 1844, the new posts of Surveyor-General of Prisons and Inspector-General of Military Prisons were awarded to Jebb. These appointments created the basis for the Prison Directors, Commissioners and Inspectors who followed in the nineteenth century, marking the start of what McGowen has called the "rise of prison administrators".[52] In 1850, Jebb left the army and was made Chairman of the Directors of Convict Prisons. Responsible only to the Home Secretary, he supervised the construction of many of Britain's prisons and was involved in managerial, medical and penal decisions. He was an innovator and experimenter, with much of his career focused on perfecting the convict prison system he had helped to create.

For Jebb, the purpose of the convict prisons had always been to create a fair scheme for punishment and reform through a uniform system of institutions. He was, however, the instigator of several separations of people within the prisons. The Prison Directors and government attempted to make sentencing and punishment in convict prisons as consistent as possible on all sites throughout the period, as is demonstrated in this thesis. To do this they created, implemented, and adjusted the "separate system"—a novel form of

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[50] Parkhurst was a convict prison for juvenile boys between 1837 and 1864. It aimed to reform the boys as much as possible before sending them abroad on a transportation ship or to one of the new reformatory schools from the 1850s. The location of the prisons archives is currently unknown, it is believed they might still be stored in Parkhurst, which is now a high security prison, or be in a private archive (or garage). The staff at the Isle of Wight Record Office are now trying to locate papers which were known to have survived at least until the year 2000 when they were referenced in Brian Manser's *Behind the Small Wooden Door.*

[51] Radzinowicz and Hood 1990: 133.

[52] McGowen 1889: 92.

punishment that drew on Jeremy Bentham's panopticon (Figure 0.2) and, to a lesser extent, the American "silent system".[53] The silent system had been introduced in the state prison in Auburn, New York, in 1823. The cells allowed no contact with the outside world, or even sunlight, here complete silence was the primary form of punishment.[54] Like the silent system, the separate system kept prisoners in regulated solitary confinement but here silence was for the purposes of reformation and redemption. The emphasis in Britain was on moral and religious reform so quiet time in prison was seen as advantageous (rather than punitive) as it let convicts reflect on what they had done, and come to terms with God.[55]

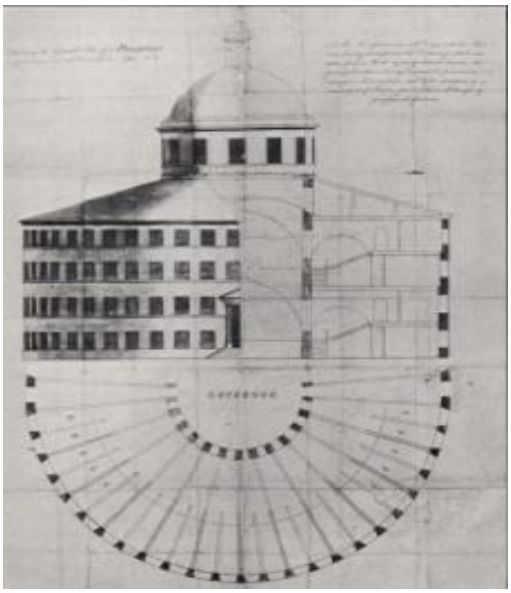

Figure 0.2 Bentham's panopticon

Bentham 1787.

When Millbank had been built in the 1810s, the Home Office based the prison loosely on Bentham's original architectural plans for a panopticon prison. In Bentham's designs the panopticon was circular so that everyone, including both prisoners and guards were always being watched by each other (Figure 0.2). The chapel was central reminding them of God's omniscience. Awareness of constant observation was meant to encourage changed behaviour which would become internalised.[56] In truth, nothing was built in Britain which

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[53] See Evans 1982 for American influences on Millbank's architecture; The British Government were aware of changes in the American Penal system and in 1821 a Select Committee was appointed by Earl Grey's administration to report on the state of punishment and they drew heavily on American Prisons. Brodie et al. 2002: 87.

[54] Brodie et al. 2002: 87.

[55] Goldman 2002: 146; In Bentham's original scheme (1791) prisoners would be kept separate but by 1792 he argued for four men per room. Brodie et al. 2002: 58-59.

[56] McGowen 1998: 77-78.

actually looked like Bentham's panopticon, but the term is used to refer to any prison or institutional building "which has a centralised plan and some sort of observation post at the middle".[57] Millbank, for example, was made up of hexagons around a central church and had exercise yards in the middle of each hexagon allowing for full observation as stipulated in the circular design. Most convict prisons in Britain, although often called panopticon's are actually radial prisons (Figure 0.3).[58] The radial plan had straight wings going out from the centre rather than circular. Nevertheless, this design still kept separation and observation at the centre of prison architecture. Most of the newly built Victorian convict prisons in Britain were to have radial plans and drew on Jebb and Bentham's ideas about prisons. Old prisons were adapted and changed to fit the architectural and philosophical model. This thesis shows that both the old and new prisons were adapted because of lessons learnt about the relationship between health and architecture. It was intended that prisons would be clean, healthy and modern, as well as informed by moral principles.

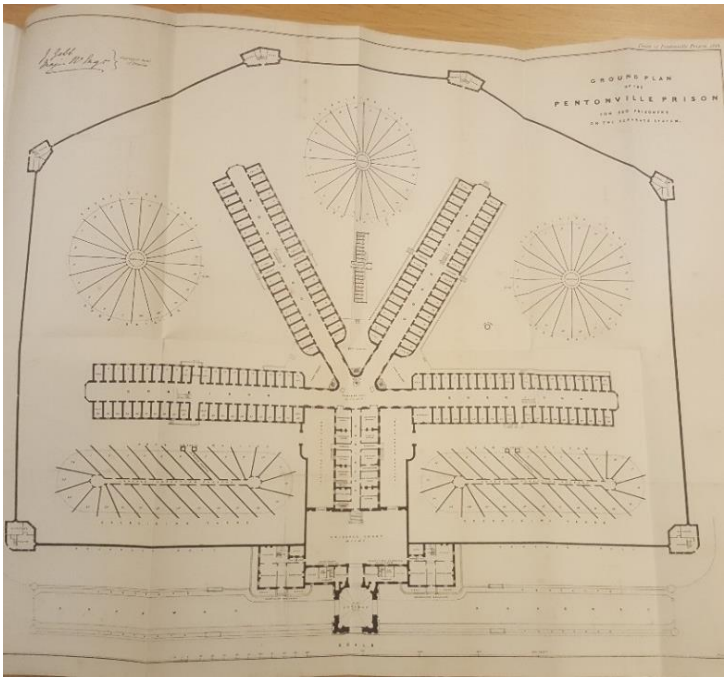

Figure 0.3 Jebb's version of a radial prison at Pentonville

Jebb 1844.

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[57] Steadman 2007: 1. Steadman argues the use of the word panopticon is confusing and contradictory. He notes that architectural historians and social scientists have all attributed great power and influence to the panopticon design in prison and other institutional management. Steadman argues that there were a huge number of contradictions in the panopticon design which were resolved by the numerically more successful radial design. Steadman 2007: 3.

[58] The radial plan stems from penal reformer John Howard's 1777 plan for a county gaol and was adapted by later architects. (Brodie et al. 2002: 63.) Including Jebb who combined radial prisons with Benthamite philosophy and architecture.

In Jebb's convict prisons discipline was to be enforced by prison staff, who were often ex-military men; this was particularly true of those who held governor or deputy-governor positions. The new convict prisons saw an increase in the appointment of those of gentlemanly status in the prison system in place of promoted gaolers, who were often seen as being no more moral that their charges.[59] Their military backgrounds were reflected in the way they ran the prisons. They were at the top of a hierarchy; the wardens and prison staff were like foot soldiers and then the inmates formed a new bottom tier in the system. The wardens and matrons, sometimes collectively known as prison officers, made up the majority of the staff and assisted the governors, chief wardens and chief matrons. As Foucault saw it, they maintained rules and enforced punishments. But, as this thesis shows, they also worked to maintain health.

Figure 0.4 Chief Warden and Chief Matron of Pentonville.

Mayhew and Binny 1862b.

Routine and structure dictated the days of the inmates and the staff. The prison staff were organised in a strict hierarchy with the governor and his deputy at the top. Beneath the governing staff were the chief warden or chief matron (Figure 0.4); the chief warden oversaw the male staff and the chief matron was in charge of the female matrons and prisoners. The chief warden and matron were responsible for ensuring "the observance of the Prison Rules..."[60] They oversaw meal times and inspections of the convicts and their cells, bedding, clothes and work. These people oversaw the day to day management of the

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[59] Priestley 1999: 269.
[60] Cambridge Country Archives. CB/2/CL/3/18/1. *Mr Hill's Rules for Staff Duties.*

prisons. They were relatively familiar with the convicts although depending on the size of the prison they might not know everyone individually. In relation to health, the chief wardens and matrons oversaw the hygiene of the prison and might discuss with the doctor individual cases.

The chief wardens and chief matrons were assisted by wardens, matrons, officers and orderlies (with job titles depending on the institution). The wardens and matrons were more likely to be assigned to a particular wing or gantry and get to know individual prisoners better.[61] This meant health, mental health or hygiene issues could be reported by the officers. There was, however, often a high turnover of this type of staff, primarily because they often dealt with violence as they attempted to implement the institutional systems, and were poorly paid.

The staff also suffered many of the same trials as the prisoners; monotony, routine and quiet.[62] Wardens were not permitted to talk to prisoners, and from 1863 the Carnarvon Committee required wardens to stay six feet away from prisoners at all times.[63] If a prisoner spoke or whispered to a warden they had to be ignored or responded to in a loud clear voice. Of course there were examples of wardens breaking the rules. Between 1877 and 1878 two hundred and forty inmates were convicted of trafficking tobacco and it was believed much of this was introduced to the system by wardens.[64] Prison officers could also be dismissed for behaving poorly. They had nearly as many rules to follow as the inmates, most of which were set out by Carnarvon Committee. These rules covered life both in and out of work – for example prison officers could not "frequent public houses" or gamble, keep bad company or swear, as this helped their own morality as well as the convicts'.

Set aside for the general staff were the prison medical officer, the chaplain and any clerks they may have had to assist them. Some, but not all prisons might have also had a schoolmaster, this was more likely if there were juveniles in the institution otherwise the chaplains might also teach reading and writing. Alternatively, there may have been men brought in to teach or oversee prisoners learning a trade. The chaplains were charged with the moral and religious aspects of reform and punishment. They visited the cells frequently, performed mass, saw each convict as they came in or out of the prison,

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[61] Thomas 1972.
[62] Anon. 1866b: 407.
[63] Carnarvon Committee 1863.
[64] Priestley 1999: 262-3.

prepared convicts for transportation, were available to offer spiritual support, were involved in education, visited the sick and performed last rites for the dying. They played a vital role in the reform process particularly if crime was seen to have stemmed from immorality. It was believed by many the separate system could induce "true conversion" rather than "temporary obedience".[65] This was because the separate system was consistent, punishment was less at the discretion of the governor (or gaoler) and the scheme include fewer physical punishments, such as whipping.[66] The prisons, it was hoped, would encourage personal reflection and genuine, rather than acted, conformity. In reality instead of revelations, there were high levels of mental illness as will be discussed in chapters 3 and 4.[67]

Placed at the centre of the convict prisons, the chapels were silent places and convicts sat in individual stalls to prevent whispering. As Priestley argues, the chapel felt very much part of the disciplinary machinery of the prisons and many chaplains took it upon themselves to further enforce discipline amongst convicts.[68] Ignatieff similarly describes the chapel as "the brain" of the new penitentiary machine as the prison system was based on solitude, hard labour and religious indoctrination.[69] Scott argued that the prisons would not have existed without religious men who believed in the system.[70] The chaplain was a legal requirement of prisons and gaols long before PMOs became compulsory, consequently chaplains have played an important role in prison history and development. The role of chaplains needs further exploration by historians, in prisons as well as the other institutions of the Victorian poor, the workhouses and asylums.[71]

Given the important place religion had in Victorian society it is no surprise that the chaplain played an important role in the prisons. The chaplains had almost as much authority as the governor. Along with the PMOs and governors, chaplains wrote reports and kept statistical data on convicts. Like the PMO's they were interested in criminality and how to treat and prevent it. As well as carrying out their assigned duties these people assisted the doctor in maintaining prison health and by keeping a steady, constant routine within the prison they helped to create the perceived necessary environment for reform

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[65] McGowen 1998: 91.
[66] *Ibid*: 91.
[67] Morrison 1891.
[68] Priestley 1999: 91-96.
[69] Ignatieff, 1878:5; Ignatieff, 1981: 80.
[70] Scott 2013.
[71] Forsythe 1987 and Scott 2013 have started this work but much more needs to be done.

and punishment. Which in turn provided standard conditions in which to study and compare criminals' health and morality.

The working relationship between the chaplain and the other members of staff, shows how religion, medicine and discipline all played their part in the prison system and the 'science' of the separate system specifically included religion, which had contributed significantly to the perceived reformatory nature of the separate system. The role of the prison chaplain was a new profession, like that of the prison doctor. Both often drew on observation and statistics to understand why inmates committed crimes and it would appear that the chaplains rarely believed crime was just caused by "evil" - it was a more complex character trait than that. Meanwhile, the prison doctor oversaw the health of the prison, tackled epidemics and advised on diet, while also quietly creating sciences of the criminals. The role of PMO was a new career path for doctors and surgeons that reflected the move by medical men more widely to professionalise their area of expertise. For example, the asylum doctors, the forensic specialists, and the legal-medical experts all established their professional position in this period.

Between 1842 and 1849, fifty-four Pentonville-style prisons were constructed in England, comprising a total of 11,000 cells.[72] Following the Pentonville model, large convict stations including Portland (1848), Portsmouth and Dartmoor (1850), Brixton (1853), and Chatham (1856), were built by the government; these were designed to emulate Pentonville and recreated the experience of colonial exile produced by transportation, but on English soil.[73] These institutions were not exact copies of Pentonville, which was modified to meet specific needs: for example, Portland was designed as a public works prison, Dartmoor was originally intended for disabled convicts, and Brixton was exclusively for women. These variations challenged Jebb's quest for uniformity, but were seen as necessary and pragmatic.

When Australia stopped taking convicts in the 1850s the hulks, which had been a temporary solution to over-crowding in local prisons and gaols, were initially filled to manage the increase in convicts staying in Britain. The sheer number of people that needed to be accommodated, combined with concerns about health and epidemics in the confined hulks, meant an alternative needed to be found. "There was nothing for it but to deal at home with the three thousand or more criminals, whom we had before been in the habit of

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[72] Du Cane 1885: 56; Smith 1962: 90.
[73] Mayhew and Binny 1862: 176–182; Priestley 1999: 5.

sending away."[74] The end of transportation did not come as a surprise. The logistical problems of transportation meant that throughout the 1830s and 1840s, many of those sentenced to transportation had their sentence carried out in the UK's hulks.[75] The Transportation and Penal Servitude Act of 1853 theoretically stopped transportation, with the notable exception of those sentenced to transportation for over fourteen years.[76] That year did not mark a sudden or drastic shift, but "penal servitude for life" was redefined in law to mean "confinement in any prison in the United Kingdom, or in any river, port or harbour of the same… accompanied by hard labour and all other penal inflictions in force at the time of passing the Act." Many sentences were also reduced in length.[77] The convict prisons were once again forced to adapt and create new spaces and to punish, reform and educate in different ways.

In 1857 the Act was amended, ending transportation officially (including for those with long sentences) as the colonies were no longer willing to accept convicts.[78] Prisons were therefore redefined in law as places of punishment and work, rather than merely holding pens before trial, transportation or death. Throughout the 1850s and 1860s, penal policy and punishment became an increasingly private business. Punishment that had been very public in the eighteenth century to deter would-be criminals, gradually moved behind closed doors.[79] This new private system encouraged the idea that criminals were different and dangerous. Despite the earlier legislation, in 1869 the final group of convicts was sent to Australia, before the absolute end of transportation from Britain.[80]

From the 1860s more prisons were built, partially in response to increased convict numbers and the end of transportation, and in part, I argue, to care for new categories of criminal defined by their bodies and health. These decisions were not made to enforce power dynamics, but were the result of perceived problems and new experiments in the management of prisoners, as will be explored in the following chapters. I argue that these different spaces were in fact created in no small part because of different medical needs

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[74] Anon 1864c: 349.
[75] Goldman 2002: 151.
[76] Elliot and Combe 1854: 410.
[77] *Ibid*: 410. For example, those who previously would have been sentenced to up to seven years' transportation would now spend four years in prison. Anon 1853f: 79.
[78] Shaw 1966: 335. There were exceptions: a small loop-hole meant it was possible to send 400–500 convicts abroad each year, mostly to Gibraltar. Anon 1864c: 349.
[79] Privatisation of punishment was finalised in 1868 with the end of public hangings. It was believed that public hangings generated sympathy for the convicted, risked mob-mentality or created space for an inappropriate family day out.
[80] McConville 1998: 121.

of men, women and children. As this thesis shows, the separate system was continually changing because of its medical implications. This thesis will show that different types of bodies and minds necessarily led to different types of architecture, medicine, labour, discipline and diet within the convict prison system. Male and female, young and old, insane and imbecilic, diseased and degenerate: each was seen as providing unique problems for prison management, and required particular approaches to be kept health, under control, and reformed. From the 1860s new experiments were trialled based on physical health, mental health, different degrees of labour and post-prison plans. Woking Invalid Prison and Broadmoor Criminal Lunatic Asylum, for example, opened in 1860 and 1863 respectively in an attempt to manage and treat convicts and people tried in court who were judged to have mental or physical illnesses. Woking Invalid Prison housed men and women, the majority (although not all) of whom were "invalids" in some way. More provisions were made for those with physical disabilities at Woking than in other prisons, although inmates were still expected to do hard labour. Meanwhile, Broadmoor Criminal Lunatic Asylum, an (in)famous asylum for convicts diagnosed as mentally ill, was another institution designed by Joshua Jebb, and the system employed there to treat the criminally insane there had to balance conventional asylum practices such as moral treatment with awareness that the patients there were also criminals.[81]

Jebb's death in 1863 necessitated the appointment of a new Chairman of Directors, Surveyor-General of Prisons, and Inspector-General of Military Prisons. On 29 July 1863, Lieutenant-Colonel Edmund Yeamans Walcott Henderson (1821–96) was appointed and held the post until 1869 when he (reluctantly) became the Chief Commander of the Metropolitan Police (Figure 0.5).[82] Henderson's role has been diminished in the majority of prison histories, despite his era having the most legislative changes in penal policy. Assisted by Edmund Frederick Du Cane (1830–1903) (Figure 0.6), who would later succeed him, Henderson reshaped the convict prisons to emphasis the role of punishment. In the early 1860s, there had been a growing perception that prisons were failing as evidenced by recidivism statistics and consequently a new regime was thought necessary. The Carnarvon Committee was set up in 1863 to re-examine prison discipline and the effectiveness of the penal system for the House of Lords. Lord Carnarvon, who proposed and led the committee, believed that labour was the route to the reform of prisoners'

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[81] Shepherd 2016.
[82] See *ODNB* 'Henderson, Sir Edmund'.

behaviour and that the law needed clarification on this point.[83] The Committee asserted that prisons lacked sufficient labour and discipline, were not "sufficiently dreaded" and that prisoners had too many luxuries (including huge libraries, personal footstools and "extra allowance of pudding").[84]

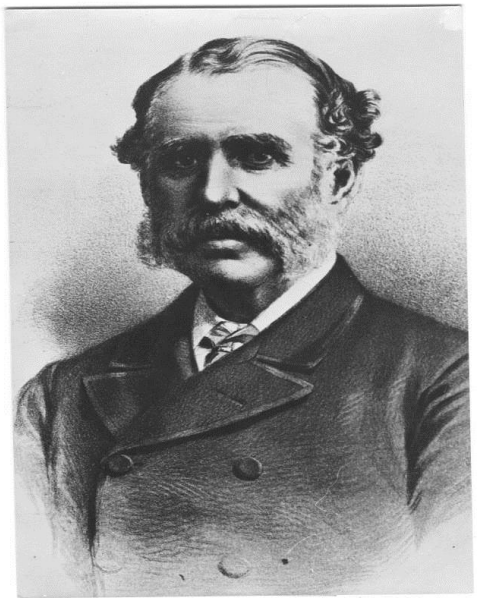

Figure 0.5 Edmund Henderson

c.1860 Battye Library collection (State Library of Western Australia)

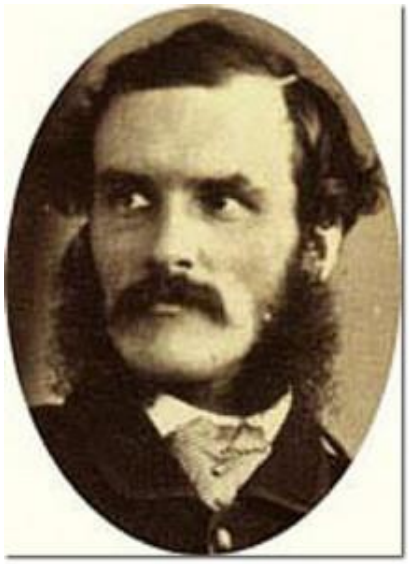

Figure 0.6 Edmund Du Cane.

Date Unknown. http://www.britishempire.co.uk/article/plymouth/ducane.htm [Accessed 7/10/14]

The Carnarvon Committee were not reformers. They believed in deterrents, supported the separate system and advocated a national policy to ensure consistent punishment across the prisons.[85] Their biggest issue was, however, the lack of agreement on what "hard labour" meant. The Committee argued that labour should only be for punishment: it should not consist of useful tasks or be geared towards reformation, as having a sense of purpose might console the prisoners rather than punish them.[86] They would then appreciate the value of honest labour when they returned to work after their time in prison. Prison staff, rather than external reformers, had the greatest objections to the Committee, believing that

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[83] A committee was created on the back of a vote which was won 22-20. Anon 1863a: 28.

[84] Smith 1962: 97; Anon 1863a: 28. The staff suffered many of the same trials as the prisoners – monotony, routine and quiet. Wardens were not permitted to talk to prisoners and from 1863 the Carnarvon Committee required wardens to stay six feet away from prisoners to reduce chance communication. Anon 1860: 407.

[85] McGowen 1998: 94.

[86] *Ibid*: 94.

prisons should be run from within the prison walls and not by government policy.[87] Working alongside the Carnarvon Committee was a Royal Commission set up by the Home Secretary, George Grey, which reported to the House of Commons. From 1863 the Royal Commission and the Carnarvon Committee attempted to draw up a concrete plan to reduce repeat offenders. This is often highlighted in histories as a potential turning point for prison decision-making. Compared to the Jebb era, they substantially reduced the number of new experimental-type prisons being built in England.

In 1865, following a spate of legislative changes, the Prisons Act started to form a legal basis for a uniform prison system. Local prisons were becoming more like the convict prisons and the remaining private gaols were being phased out. The government wanted all prisons to be "austere and vexatious."[88] Edmund Du Cane is attributed with creating (and maintaining) the centralised system which still exists today, but has not been remembered fondly by history. The cruelty and harshness of the Victorian system is often laid at his feet, perhaps because he had almost complete executive power as Chairman of the Board of Directors of Convict Prisons. Like Jebb and Henderson, Du Cane sought to save money and standardise. These two goals underpinned everything he and his staff did. In 1865 Du Cane had promised that national prisons would give convicts "hard labour, hard fare and hard board."[89] This often-recycled quote – originally from Joshua Jebb, but since attributed to Edmund Du Cane – summarises the mid-nineteenth century approach to the penal system: an approach which continued until his retirement in 1895.

The increased fear of the criminal and the statistical increase in criminal numbers meant that in 1872 it was proposed that local prisons undergo further nationalisation and fairer distribution of cost so that the nation, rather than individual boroughs, bore the price of prisons.[90] On the basis of anecdotal evidence, it was believed that crimes were geographically planned according to the perceived softness of the local prison or gaol. Various schemes aimed at nationalising the system were discussed in an attempt to appease public fears about numbers of criminals and the failure of the penal system to reduce this. These discussions were not undertaken with any intention of immediate action. Such inaction lasted until 1874 when Disraeli's second government stumbled upon

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[87] *Ibid*: 95. Evidenced by the professional witnesses from the prisons that appeared in front of the Carnarvon Committee in 1863.

[88] McConville 1981: 349.

[89] This is a widely quoted, but rarely referenced, attribution to Du Cane although it was first said by Joshua Jebb it continued to be used throughout the nineteenth century to explain English penal policies. McConville 1981: 135, *Prison Discipline &c…* 1864: 15.

[90] McConville 1998: 126.

the nationalisation of local prisons as a way to possibly reduce net taxation, as promised in their election campaign.

In 1876 the Home Secretary, Richard Ashton Cross, was given permission to bring in legislation to nationalise all prisons and manage them all like convict prisons using the separate system.[91] Officially, local prisons came under government control in 1877 meaning that, in theory, the same physical and philosophical system applied to all inmates in all prisons: it just lasted longer for convicts than local prisoners. It took a little while to bring all prisons into one system.[92] Du Cane, and Disraeli's government, argued that nationalisation would be cost-effective. Time would show that they were incorrect, and the changes were an expensive venture. Du Cane's miscalculation may have been intentional, as he saw local governments as incompetent and wanted to spread his own influence.[93] Regardless, the Prisons Act transferred direct control of local prisons to the HO and the Prison Commission headed by Du Cane.[94] This legislation surrounding the prisons' nationalisation cemented the ideals of those like Du Cane into the prisons. The legislation, like the physical structure, influenced and the reformatory and punitive nature of the institutions and the way inmates and staff interacted.

By the 1880s, the English system was more tightly regularised. The complex nature of its development meant it was not totally stable and continued to change into the twentieth century before further upheaval during and after the World Wars. Many histories of Victorian prisons mark end the period with the Gladstone Committee in 1895.[95] This committee started the run-up to the 1898 Prison Act, which reiterated the importance of reform, as well as punishment, and reduced some of the harsher elements of prison life. However, I believe the experimental era, in which individual men in the prisons and the prison department could make a difference, was ending before that report and subsequent legislation. This is not to say there was no experimentation before or afterwards. The character of this period was different, however.

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[91] *Public Works Loans Bill.* 4 July 1876.

[92] For example, Armley Gaol (Leeds) was nationalised in 1878 when it was bought from Leeds Corporation for £9,000 by the HO, becoming part of the Prison Service. Armley Gaol did have some government interaction before this point, notably the Government paid the gaol to hold those destined for transportation. All other prisoners were "private prisoners" and expected to pay for themselves through labour.

[93] McConville 1998: 127.

[94] Priestley 1999: 6.

[95] Johnston 1981; Hardy 1993b, 1995; Sim 1995; Brown 2003.

General management style and penal objectives had to be decided in the nineteenth century when variants on the convict system were trialled through experiment. Told as stories of power, or of economic or class struggle, the current histories of the prison exclude the methods that prison directors and staff used to develop, create and change the prison system. Many PMOs, chaplains and prison administrators saw it as an experiment from the beginning. But for all of the staff this was coupled, by necessity, with the protection of patients' health its central aim, after all sick prisoners could not perform hard labour, or attend chapel or school so would not benefit from the reformatory system. Equally it was costly to provide medical care to sick convicts, and costly to other institutions like the workhouse if prisoners were released when they were unwell. Although prison directors and staff sought a uniform prison system, what they created was a system of prisons with uniform goals that were sought through slightly varied methods. The prison experiment ranged from large-scale building projects and national policies, to individuals trialling new technologies like photography and statistical analysis. As will be discussed in the next section, the methods employed were dictated by awareness of the physical and mental health of convicts that came in the day-to-day running of prisons.

IV. Practice: Prison Medicine and the Prison Experiment

The nineteenth-century convict prisons were not just an experiment in punishment, penal policies, legislation, architecture, and Benthamite philosophy. This was an all-encompassing project in which every aspect of a convict's life in prison had to be carefully managed. The importance of punishment and reform will be explored further in this thesis. It was not, however, punishment that drove changes in the prison system: it was health. Punitive steps were meaningless if the convict was not well enough to perform the punishment or understand its implications. Health was one of the driving forces behind prison-policy changes; to this end, research and experiments carried out by PMOs were fundamental. Prison medicine covers a huge range of disciplines and practices pertaining to the health of a specific population. Consequently, prison medicine had a disproportionately important role to play in the experimental era.

There is even less written on nineteenth-century prison medicine than about the history of prisons themselves. Few works have focused on the subject, although medicine featured in passing in some of the previously mentioned works. There was no training school or scholarly journal for prison medical officers but medical men from the prisons also taught medicine in the medical schools bringing their own research back into teaching spaces.

Like hospital staff the prison medical officers were guided by their own training and the trends of the time in scientific medicine. As Porter has pointed out in the nineteenth century this led to increased interest in pathology and physiology as well as the latest technologies.[96] The hospital has become the main focus for historians looking at nineteenth century medicine but recently there has been a concerted effort to bring less obvious or prominent parts of the medical establishment to the fore.

The first study dedicated to the history of medicine in prisons was in Richard Smith's *Prison Health Care* (1984). Smith argued that prison medicine and the NHS needed to be brought much closer together and he attempted to persuade all doctors to take more interest in prisons and turn them into places of research.[97] He used his history of prison medicine to highlight the ongoing problems for prison doctors, although he did not ask why medicine was practised or developed in the way that it had.[98] Smith celebrated prison medicine as the "oldest civilian medical service in the Britain", claiming it was approximately two hundred years old in 1983.[99]

The exact start date of a (or *the*) Prison Medical Service (PMS) is unclear. A number of historians have made suggestions. Smith himself later suggested that nationalisation in 1877 marked the start of the PMS.[100] Alternatively, the much earlier Health of Prisoners Act of 1774 has been identified by historian Joe Sim as the start of organised prison medicine.[101] This Act allowed for medical intervention if health was believed to be threatened in prison, but did not assign permanent medical staff to prisons. Anne Hardy has argued that a PMS dedicated to the constant care of prisoners only truly began in 1850 with the Act for the Better Government of Convict Prisons, as this was when full-time, career PMOs began to be employed.[102] Despite the conditions for a burgeoning prison medical profession in the 1850s, many local prisons still only had part-time surgeons who came in from the local area when needed as a cost-saving measure. When the law changed in 1850, doctors had to increase their visits from a couple of times a week (plus emergencies) to daily attendance. Differing from previous historians, I argue that whilst it is true there was medicine available in early prisons and gaols, specific employment in

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[96] Porter 1997: 341-343.
[97] Smith 1984a, 1984b.
[98] Sim 1990: 1, 9.
[99] Smith 1983a: 1788.
[100] *Ibid*: 1787.
[101] Sim 1990: 11.
[102] Hardy 2006: 60.

prisons began with the convict prisons. The first PMOs working within the government-managed convict system could be found in Millbank from 1816, but a consistent and communicative medical *service* began with Parkhurst and Millbank in the late 1830s. The service was then substantially strengthened by Pentonville's opening in 1842 and PMO became a legitimate career path for medical men.

Most histories of medicine do not include prison staff as an important actors' category, and neither do the histories of psychiatry, statistics or law. Yet PMOs contributed research to all of these fields, and they were integrated into communities of medical, psychiatric and legal practitioners. Bynum has pointed out the nineteenth century saw the rise of clinical or hospital medicine.[103] PMOs were all trained in similar ways. They had to complete courses at medical schools signed off by official bodies and had to work in hospitals to get their qualifications. The practices and research methods from the hospitals carried straight across into the prisons. There was no specific training or dedicated journals for PMOs, but medical men from the prisons taught medicine in the medical schools, bringing their own research and experiences back into teaching spaces.[104] The hospital has become the main focus for historians looking at nineteenth-century medicine, but recently there has been a concerted effort to bring less prominent parts of the medical establishment to the fore.[105] Medical care in prisons was completely dependent on the expertise, temperament and knowledge of those who practised in each prison. They drew upon and contributed to contemporary knowledge, built on a general medical and surgical education and drew on systems developed in hospitals, workhouses and asylums.[106]

The prison created new, secure roles within the civil service, but this presented its own ethical problems and conflicts; did the doctor serve the patient-convict or the prison? The chaplains, PMOs and surgeons in particular had to balance prison discipline, the goals of reforming and punishment and the Benthamite rules on lenity, severity, and economy, all

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[103] Bynum 1994: 25.

[104] See Hanley 2017 for a recent study of medical education and practice. Hanley focuses on venereal disease but explores changing medical practice, technologies, drugs and education in the nineteenth century

[105] For example the roles of nurses, midwives, medical officers of health, asylum medical officers and sports doctors. See Halliday 2003; Marland 2004; Heggie 2010, 2011a, 2011b; Finn 2012; Borsay and Hunter 2012; Reinarz and Scharz, 2013; Hanley 2017; Wallis 2017a, b for examples.

[106] Prisons and workhouses although managed separately had shared policies as inexpensive but sufficient deterrents "an unhealthy pauper was likely to be a permanent pauper, while a debilitated ex-prisoner was not likely to find honest work. Within the institutions sick inmates were found to be both more expensive and more troublesome that those who were healthy" Johnston 1985: 97.

with their responsibilities as doctors and religious men.[107] For the chaplains, Scott has argued, this could be done since many believed that punishment and the separate system would lead to religious reform, so the chaplain's work and the prisons role could be seen as compatible. Nevertheless, like the PMO the chaplain could make recommendations to the governor relating to prison health and wellbeing. In particular chaplains had responsibility for education and mental health, especially in the period before Woking and Broadmoor opened in the 1860s. Similarly, for the PMOs it was just as complicated; prisoners had to be punished, deterred, not have more than others, and not cost the state and be kept healthy.[108] Priestley argued that mid-Victorian prison medicine was often compromised by "appointment to fundamentally disciplinary tasks. The doctors patrolled the narrow straits that separate hunger from starvation and punishment from outright cruelty…. They lent to the work of preserving their employers' reputations whatever dignity and authority their emerging profession possessed".[109] Yet to balance the dual loyalty between physical, mental and spiritual health with the prison service, the chaplain and doctors could make recommendations to the governor about punishment, food allowance, exercise and labour, giving them immense power in individual lives.[110] The doctor could, if he felt it was necessary, over-ride the governor and secure early release of an inmate, meaning he held a unique position within the system.

Most historians looking at the PMS have focused on this ethical conflict of dual loyalty and have discussed it in terms of power. In 1990 Joe Sim published *Medical Power in Prisons*. As the title suggests he drew heavily on the Marxist and Foucauldian arguments that had emerged from the 1960s to the 1980s, claiming that the neglecting of "power" in the history and sociology of prisons was one of its greatest weaknesses and needed readdressing.[111] Following Foucault's arguments on power struggles and Ignatieff's desire to reassert historical detail into the narrative, Sim focuses on the class-based prejudices and power struggles at play within the English prisons. He situates the new prisons in the

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[107] Wiener 1995: 49. The rule of lenity argued punishment should not endanger life and pain should only be inflicted when it had clear and proportion results (47). The rule of severity argued that prisoners should not have more than the worst off honest people in the state (47-48). The rule of economy argued that expenditure beyond what was necessary to maintain the first two rules was a "waste of social resources that could have been otherwise employed to increase the sum total of happiness." (48)

[108] Tomlinson 1978; Wiener 1995; Priestley 1995.

[109] Priestley 1999: 188.

[110] *Ibid.*

[111] Sim 1990: 8.

changing economic and social structures emerging from the industrial revolution.[112] Sim brings into question assumptions that medical men in prisons were benevolent or unbiased suggesting instead that their own beliefs and their struggles with dual loyalty should be taken seriously. He also suggests that, from the early nineteenth century, some prisoners struggled against medical power as the insane fought against psychiatric medicine, further complicating the story and giving a voice to prisoners, who were still lost in histories of prisons.[113] Although an important work in the history of prison medicine, his book was only referenced three times in *The Health of Prisoners* (1993)—an edited volume that seems to have been a response to the ongoing debate about the relationship between prison medicine and the NHS. Sim's was explicitly Marxist and argued medically ideology and medical practice was shaped by the disciplinary structures employed in the prisons.[114] He argued there was an ongoing struggle between doctors and prisoners which was in contrast to the more narrative style in *The Health of Prisoners*. In that volume, Stephen Shaw reflects that many of the authors in the volume argued for continuity from the eighteenth to the twentieth centuries.[115]

PMOs have always had to think about physical health, malingering, contagion and mental health, as well as tackling more philosophical questions about the relationship between medicine and moral health, eligibility and of course the conflicts between doctors and prisoners. In *the Health of Prisoners* Anne Hardy further assesses medical men as part of the system of control at play in the institutions. Like Sim, Hardy shows that it is too simplistic to assume that medical men only acted with benevolence. Using the case of William Guy, a Millbank PMO, she shows that PMO's had complex motives and had to balance health and punishment. Despite Guy sometime choosing to ignore medical advice from his contemporaries Hardy concludes "many, perhaps most, prison medical officers valued their charges health, and were prepared not only to be critical of the values of authority, but to circumvent by such means as lay within their power, disciplinary instructions which they considered damaging to health."[116]

In contrast to Hardy, in his 1999 study of *Victorian Prison Lives,* Phillip Priestley characterised medical men as performing perfunctory, limited and sometimes barbarous

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[112] Sim 1990; Ignatieff 1978; Hardman 2007: 16–17.
[113] Sim 1990: 5–10.
[114] Sim 1990.
[115] Shaw 1993: 171-177.
[116] Hardy 1995: 77.

medicine in order to maintain discipline.[117] Discussions of power continue in 2014 with Ciara Breathnach suggesting that actually the balance of power in prisons in England and Ireland was not one-sided in favour of the PMOs, but instead she argues that some prisoners were able to use acquired physiological knowledge and prison know-how to use the infirmary to gain extra food and respite and to temporarily avoid hard labour. The convicts could and did play the system, taking some of the power back.[118] These histories all emphasise the conflicts between doctors and patients, and between doctors' duties as medical men and their responsibilities to the disciplinary institutions in which they worked. Yet there has been a surprising lack of patient voices in the medical narratives. In 1995, Stephen Shaw indicated a lack of patient views.[119] Priestley took up this project in 1999 and more recently, following tends in history of crime and prisons more broadly, attention is turning to the convicts themselves or to convict groups, although none focuses specifically on medicine. In 2015 the academic project *Prisons Medical Care and Entitlement to Health in England and Ireland, 1850-2000* project started to address prisoners' experience of healthcare and will shed further light on the PMOs work. As with Smith's 1984 study, this project relates prison history to contemporary debates in prison medicine, looking, for example, at HIV/AIDS and mental health in prisons.[120]

Some stories of individual prison medical men have been written, such as Anne Hardy's chapter in *The Health of Prisoners*, but these are rare.[121] Hardy highlights the complex mixture of benevolence and repression shown by PMOs but argues that most did value their patients' health and would circumvent discipline to protect it.[122] The history of the prison doctor is mixed, with views presented being either very positive or very negative, suggesting that doctors worked to either improve health or enforce punishment. Outside of prison histories there is little, if anything, about PMOs in histories of medicine. Other institutions, such as asylums, have been addressed by historians of medicine, but not prisons as much yet.[123] Occasionally a prison doctor might be discussed if they published, but their place of work is rarely acknowledged.

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[117] Priestley 1999: 167–190. Priestley sets out in his preface that he disagrees with modern prisons and sees the Victorians as the creators of this system; he has little time for time staff or philosophy of Victorian prisons and sets his agenda as explaining why they were, and are, wrong. ix–xiv.

[118] Breathnach 2014: 67–86.

[119] Shaw 1995: 174-175.

[120] For more details on this project see www.histprisonhealth.com

[121] For example Hardy 1993; Sim 1990; McConville 1995.

[122] Hardy 1995: 76–77.

[123] Saunders 1983, 1988; Bynum et al. 1985a, 1985b, 1988; Foucault 1978, 1989; Scull 1981, 1990, 1991, 1993, 1999, 2015; Smith 1981, 1991; Showalter 1987; Porter 1991, 1997; Gutting 1994;

This thesis addresses this oversight, exploring the everyday tasks of PMOs, prison surgeons and their staff. The PMOs had a significant impact on convicts' lives and labour in the convict prisons. They managed sanitation, hygiene, clothing, diet, exercise and labour, in addition to managing the hospital and treating physical and mental illnesses. Furthermore, they often spent time on research or observation. Initially, the goal of the PMO was to maintain health and avoid epidemics. For some PMOs, however, the role developed into improving health, often through diet and sanitation. They became concerned about women's health, mental health and the effects of confinement and silence on the body and mind. In trying to manage health PMOs found they had to manage almost all aspects of prison life from punishment to diet and exercise. They needed to be aware of the bodily and mental health of prisoners, and distinguish the sick from malingerers. In many ways, the PMOs had powers beyond other members of staff, as they were the only ones with absolute discretion over everything to do with health. It was the PMOs who had final approval or veto power in relation to labour, punishment, diet and living conditions.[124] The aim was a healthy system where everyone was treated uniformly. From early on it was realised by Millbank's staff that having a philosophy, such as Bentham's utilitarianism, was not sufficient: the medical consequences were too high and further experimentation was needed.

The convict body thus became something to study. Not just for interest's sake, but to improve health. This thesis explores some of those PMOs, who went beyond basic attempts to keep their patients healthy (or at least able to work) by engaging in research. Experimental medicine is usually equated with laboratory medicine, but, in this case, each prison could be compared to a large laboratory space with control over all aspects of the convicts' lives.[125] The new prison system provided a place for a new type of workforce, including prison medical staff; who over-saw admissions of prisoners, cared for general health, carried out post-mortems and unofficially studied the new sciences of the criminal. They had a ready-made sample group in a specific place that could be studied and classified, and longer prison sentences meant individuals could be observed for longer periods of time.

Micale and Porter 1994; Forsythe, et al 1996; Shorter 1997; Melling and Forsythe 1999; Fullford et al. 2013.

[124] W.B.N. 1903: 83.

[125] French 1975; Cunningham and Williams 1992; Bynum 1994, 2008.

Each new prison was informed by medical considerations and was forced to adapt to health concerns. Each chapter in this thesis offers an example of this. The work of the PMOs and the reports they wrote for the HO and for publication fundamentally shaped the Victorian convict-prison experiment. This thesis reveals some of the ways this was done. Each chapter focuses on a different space where the prison system had different medical concerns and hypotheses, exploring further the relationship between medicine, experiments and prisons and how they have been understood by historians. Furthermore, I also show that, although the PMOs were in a unique institution, they were not separate from medicine or psychiatry as practised and researched around the country. Rather, they were very much a part of this broader work. As such, they should be acknowledged by historians writing about nineteenth-century general and specialist medicine. Marginal or alternative institutions have often been neglected in histories, however, the nineteenth century saw a dramatic increase in institutions in which medicine was practised.[126] This thesis concentrates on the convict prisons, but many of the general lessons about medicine in civic institutions, practical approaches to health and medical research can be applied to other spaces.

V. People: Understanding the Criminal

It is not only general medicine and psychiatry that can be illuminated by looking at civic institutions. The prison also informs our understanding of other nineteenth-century sciences and philosophies. Bentham's original prison designs and the philosophy that underpinned them were based on the understanding that humans possessed free will and rationality, so had *chosen* to commit crimes. Their mentality and morals needed reforming and they needed to be punished for their poor choices. Other possible explanations for people committing crimes were also offered in the nineteenth century, including family, environment, community, education, religion, alcohol/tobacco, entertainment, and urbanisation. Broadly speaking, explanations for criminality by the 1850s were either environmental or inheritance based.[127] This thesis shows that in the 1840s and 1850s, convicts were categorised in prisons on medical grounds—as male/female, healthy/unhealthy and sane/insane, categories which made their way into other spheres including the police, legislation and the media. In the 1860s, new categories of criminals

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[126] For further reading see Reinarz and Schwarz 2013 on medicine in the workhouse, Hanley 2017 on lock hospitals and Finn 2012 and Wallis 2017b on asylums.

[127] In the largest possible sense: this includes, but is certainly not limited, to Darwinian inheritance.

emerged from within the prison system, including; "casual criminals" (opportunists, probably influenced by environment), "hardened" or "habitual criminals" (repeat, immoral offenders, influenced by the people and environment around them) and "hereditary criminals" (repeat offenders who had inherited criminality from their families. Sometimes hereditary criminal also encompasses those who were taught criminal ways by their family having probably been born to criminal or impoverished parents).[128]

This section sets out the complex problem of understanding criminals as presented to nineteenth-century PMOs. It argues that what they were doing was distinct from Cesare Lombroso's "criminal anthropology", and their theories of crime were motivated by pragmatic aims.[129] The PMOs had scientific, medical and most importantly practical reasons to categorise, explain and understand criminals.

Statistically, most of the criminal population came from the lower-middle and working classes. As well as the obvious social causes, such as poverty, this was in part because the police and magistrates were fairly reluctant to prosecute the middle or upper classes. The pauper and the criminal were linked in people's minds.[130] Criminals from the upper classes were generally seen as slightly corrupt, or 'bad apples', rather than a part of the so-called criminal class. It offended Victorian sensibilities when people who 'should have known better' broke the law.[131]

The statistical increases in crime and repeat offences in the nineteenth century, combined with media panics and increased urbanisation, meant there was a strong desire to reduce crime, punish 'properly' and reform past offenders. In order to achieve these goals, it was

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[128] In the later sense no biological explanations are being drawn upon. It is a much more colloquial version of inheritance than biological.

[129] Cesare Lombroso (1835–1909) was an Italian-born criminologist, who aimed to define and understand "the criminal." He believed that criminality was both innate and inheritable in some people. He is famously known for his studies of physical characteristics of criminals where he attempted to demonstrate that criminality could be seen physiologically particularly in facial features, tattoos and cranial studies. These physical features demonstrated that criminals were "evolutionary throwbacks", who were biologically uncivilised but living in the civilised world. This biological understanding of criminality helped explain criminals and predict offenders and re-offenders. Lombroso theorised that criminality, madness and genius were all sides of the same psychobiological condition and an expression of atavistic *degeneration.* He believed in the "born delinquent" or "born criminal" whose development had stopped at an evolutionary early stage. Mazarello 2011: 97; Rafter and Gibson 2009. Lombroso's most famous book was *Criminal Man* (1876).

[130] Parslow 1978: 108.

[131] For example, Doctor William Palmer (1824–1856) poisoned his friend John Cook in order to claim his winnings following a horse-race. The murder shocked the public because they felt as Palmer was middle-class and a doctor he should have both morality and professional integrity.

felt prudent to understand "the criminal" and "the criminal class".[132] A wide variety of civil servants, philanthropists and legal professionals, as well as those interested in education, statistics, psychology, empire, and biology, to name but a few, labelled, defined and categorised criminals. McGowen argues that "the classification of prisoners was born from a desire to limit the spread of moral contagion."[133] This is only partly true. As this thesis shows, the prisons wanted to reduce repeat offenders, but to do so they needed to treat the physical, mental and moral health of convicts. To make the system effective and healthy they had to treat people differently, which resulted in new types of convict prison being built to manage new convict categories. Consequently, the most useful and enduring categories came from within the prisons. PMOs needed to categorise convicts for practical purposes, rather than theoretical interest. Who was seen as a criminal was flexible, changing and more complicated than just those convicted of a crime.

Under the joint forces of Henderson and Du Cane, the 1860s saw a hardening of penal policy alongside the emergence of a new, feared class of criminal, the "habitual criminal". The language in which criminality was discussed became "more extreme, even hysterical" and rhetoric of reform and moral improvement was replaced by suppression and punishment.[134] During the late 1860s the habitual or hardened criminal was a cause of much anxiety. *Chambers's Journal*, for example, reported that "criminals are a race apart, for whom the ideas, the rules, and the aspiration of ordinary life have no meaning, whose war with society is, in the most cases, inextinguishable, interminable—whose lives are not so much perverted as inverted".[135] Those in this separate "race" might be labelled as "hereditary criminals", who were born into a criminal lineage, or "habitual criminals", who were generally seen to have been brought up by criminals, and thus have adopted criminal behaviour, even if they had not inherited it biologically. These people were contrasted with "casual criminals", who committed crimes because of impulse or temptation. These categories were also practical tools in prisons, with different types of

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[132] It is not clear who coined the terms but a distinct group of people were identified at least by the 1830s as being a distinctly criminal class of people from amongst the poor and lower classes. Throughout the rest of the nineteenth century the language of the "criminal class" was used by newspapers, social commenters and in fiction. For example Matthew Davenport-Hill described the criminal class as "a class of persons who pursue crime as a calling" in 1839 (cited in Johnston 2015: 26). Charles Dicken's 1837-1839 *Oliver Twist* gives classic depictions of stereotypes of criminals the criminal classes. Henry Mayhew wrote of a separate "class" of thieves who were mainly young, idle and vagrant and who enjoyed the literature that glorified pirates and robbers (Mayhew 1865; Emsley 2005: 73).

[133] McGowen 1998: 97.

[134] Goldman 2002: 161.

[135] Anon 1866b: 406.

criminals needing different reforming programmes (assuming they could be reformed at all) and the labels were used to explain statistics and to understand institutionalised people.

Attempts were made to improve identification of repeat offenders.[136] In 1863, the first criminal registers were formed, and photography of prisoners was suggested as good practice, although it did not become compulsory until 1871.[137] Some believed that tattooing or branding would be a better identifier of criminals, but photography won out.[138] Photography was considered to be both humanitarian and a promotion of science. The introduction of the prison record was part of a wider scheme to identify the "criminal class" as a group of people distinct from ordinary people and other offenders.

One of Du Cane's first actions as Director was the introduction of the 1869 Habitual Criminals Act, which tightened the ticket-of-leave system, created a convict register and extended police power to supervise released criminals who had committed more than two offences.[139] During the reading of the Act in Parliament it was declared that the criminal class had become "assertive and dominant" and this needed to be controlled.[140] The 1869 Habitual Criminal Acts and the subsequent 1871 Prevention of Crimes Act were the first legislative moves to deal with a specific class or type of criminal, and also the first to officially allow different treatment of different groups of criminal on non-medical grounds.[141]

Working to understand criminal nature became a professional occupation, but who counts as a criminologist? Those involved in what we now call criminology might be interested in one or all of a) detecting law breakers, b) the problem of custody and treatment of offenders, c) explaining crime and criminal behaviour.[142] The term "criminology" did not

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136 McConville 1981: 327. (See chapter 4, section V of this thesis).

137 *Report of the Select Committee on Prison Discipline*. 1863; *Prevention of Crimes Act.* 1871. Photographs of prisoners were taken before 1863, for example by the Governor of Bristol Gaol and keen amateur photographer, James Gardener, in 1852 but Robert Evans Roberts the Governor of Bedford Gaol is thought to be the first in Great Britain to use photographs for identification purposes in 1859.

138 Priestley 1999: 12–13; Carnarvon Committee 1863: 336.

139 Tickets-of-leave were awarded to men who were released after they had served their minimum sentence but before the maximum. They had to report to police and avoid crimes and immoral behaviour. Goldman 2002: 152.

140 *Ibid*: 154.

141 Andrew Scull (1977: 337) sees these kinds of separations and categorisations as what made the nineteenth century approach to deviance different from what came before in the eighteenth century.

142 Jeffery 1960: 36. Mannheim suggests the label "penologist" to describe people "whose main interest was in the punishment or treatment rather than in the scientific analysis and observation of crime and criminals." Mannheim 1960: 1.

appear in Britain until 1879 when it was used to title a law school lecture on penal legislation.[143] In this case, criminology was indistinct from criminal law. The term was again suggested in 1890 as an alternative to Lombroso's criminal anthropology but does not appear to have entered common usage in Britain until 1913 when Charles Goring published *The English Convict: A Statistical Study*.[144] The lack of the word does not, of course, mean that people were not interested in criminals. Many of those identified by historians as being interested in criminology would have seen themselves as falling into some other category—lawyers, penologists, psychiatrists, administrators and sociologists, for example.[145] I am adopting Becker and Wetzell's term "sciences of the criminal" (rather than sciences of crime) to describe broadly the work done to understand criminality before criminology became a discipline.[146] This is partly because the men working in this field did not identify as criminologists, but also because I believe the term has connotations relating to biological interpretations of criminality.

The lack of a disciplinary identity did not mean that criminological questions were not raised in the nineteenth century. Hermann Mannheim put together perhaps the first history of "pioneers" in criminology, picking out the likes of Cesare Beccaria, Jeremy Bentham, Henry Maudsley and Cesare Lombroso for attention.[147] These individuals did do important work. In the history of criminology, however, as this thesis shows, these impressive individuals did not operate in a vacuum, nor was their work what we would now call criminology. Indeed, in many cases their work was not immediately influential. Since Mannheim's work, a variety of accounts have been written about the history of criminology and its related fields.[148] Many of these are volumes that highlight individuals, key thinkers from the eighteenth to the twentieth centuries. Most of these individuals have been called "criminologists" by historians and have earned the label because their work focused on the criminal nature of individual offenders. The most famous and commonly cited of these is the Italian Cesare Lombroso, who defined what he called "criminal

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[143] *OED Online.* "Criminology".
[144] *Ibid*; Garland argues criminology was not a discipline in Britain until 1935. 1988: 1.
[145] Mannheim 1960: 1.
[146] Becker and Wetzell 2009: 2.
[147] Mannheim 1960.
[148] Jones 1986; Rock 1988: 1994; Wiener 1990; Lynch 2000; Davie 2005; Rafter and Gibson 2006; Becker and Wetzell 2009; Rafter 2009; Gibson 2009; Hayward *et al.* 2010; Knepper and Ystehede 2013; Jalava *et al.* 2015.

anthropology" in the 1870s.[149] Lombroso is hailed as the "father of criminology" and it is often assumed that his theories were taken up, wholesale and quickly, around the globe.[150] This has been justified by historians, "since it was the impact of Lombroso which sparked off the international congress and debates of the 1880s and brought the idea of a criminological science to public prominence for the first time."[151]

I argue that too much emphasis has been placed on Lombroso in the English context. Lombroso's ideas did not really feature in England until Havelock Ellis introduced them in 1911, and his work was more relevant in the twentieth century than the nineteenth. Historians have repeatedly focused on Lombroso, but I find little evidence to support their assumptions that his work shaped British criminology.[152] Their evidence for the influence of Lombrosian criminology seems to have come from the use of the word "hereditary", which is then interpreted in Lombroso's framework. As discussed above, the categories of criminals were flexible and poorly defined. The term "hereditary criminal" was used, but it generally meant a criminal who came from a criminal family (this might mean that a relative was anything from an alcoholic to a murderer). For many historians studying early criminology, the discipline and its scientific credentials are defined in biological terms, and unjustifiably pinned to Lombroso's criminal anthropology.

In one of the few works on criminology that explicitly connects sciences of crime and prisons, Neil Davie's *Tracing the Criminal* defines criminologists as those nineteenth-century figures who sought to understand, scientifically, crime and criminals. He claims that scientific criminology grew out of the understanding that criminality was physically manifest in the bodies and minds of criminals. Consequently, the criminal population could be classified in similar ways to taxidermy samples.[153] Davie's characterisation of criminology as a scientific discipline prompts this biological analogy. This thesis shows Davie over emphasises biological explanations of criminality. It is more accurate to draw parallels with psychiatry, which was also attempting to create a classification system in

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[149] The lack of translations until the twenty-first century, meant Lombroso's Criminal Anthropology was often misunderstood or simplified solely to his concept of the "born criminal" but he had a complete atavistic theory to explain criminals. Gibson 2009: 137.

[150] See Gibson 2009.

[151] Garland 1988: 2; Rock 1985; Garland 1985; Davie 2005; Becker and Wetzell 2009; Rafter and Gibson 2006; Gibson 2009.

[152] Garland 1985, 1988; Rock 1985; Scott 1960; Davie 2009; Rafter 2006, 2009; Bowling and Ross 2006.

[153] Davie 2005: 125–178, 17.

which mental illness, like criminality, could be found in the body, but in which the symptoms, or behaviour of patients, were necessarily used as the basis for diagnosis.

Davie argues that British criminologists defined their own profession by challenging Lombroso's criminal anthropology, particularly the concept of the "born criminal".[154] He claims Lombroso became something of a straw man for British criminology, even though by his own argument British criminology actually shared many of criminal anthropology's fundamental ideas.[155] This thesis shows that the PMOs who, as Davie illustrates, made up a substantial part of the so-called criminologists, were more interested in explaining criminality to improve the prisons than to shoot down Lombroso or further professionalise. Whether by finding individuals that supported or rejected Lombroso, there has been over-emphasis by historians of criminology on one individual, whose influence in Britain was negligible until the twentieth century. Consequently, much of the work carried out by early scientists of crime is missed, and criminology has come to be perceived in very narrow terms, and thus a consistent definition as to what counts as criminology is lacking.

It is in the context of Lombrosian criminology that Davie sees a Scottish PMO, James Bruce Thomson, as the pioneer of British criminology, because of perceived similarities between his work and Lombroso's. Thomson has been described as "Lombroso before Lombroso" but without the "brilliance of packaging" that Lombroso had to make criminology (or criminal anthropology) a seemingly proper science.[156] This is unhelpful and inaccurate. Thomson's article "The Hereditary Nature of Criminals" (January 1870) is selected by Davie as the start of British criminology.[157] The over-arching reason this paper was chosen by Davie is because it was the strongest example of hereditary theory being employed by someone studying crime in the 1860s and 1870s. Davie joins historians Roger Cooter, C. H. S. Jayewardene and J. H. Lyell in arguing that Thomson was a (if not *the)* British pioneer of criminology.[158]

As early as 1912, Lyell argued that Thomson "forestalled the conclusions of his more brilliant contemporary [Lombroso], and whose writings have achieved a Continental fame."[159] Yet it is a misreading of Thomson to characterise his work in Lombrosian or Darwinian terms. Similarly, it is fundamentally wrong to perceive early criminology and

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[154] *Ibid:* 67–228.
[155] *Ibid:* Chapter 3.
[156] Rafter 2009: 163.
[157] Davie 2005: 29.
[158] Lyell 1912; Jayewardene 1963; Cooter 2004; Davie 2005.
[159] Lyell 1912: 364.

studies of criminality in terms of biological heredity, as this reading ignores the wide variety of practitioners and research paths which were being explored in order to understand criminals and criminality. Godfrey and Lawrence explain this gap, arguing that many people in the eighteenth and nineteenth centuries saw crime as a moral issue and linked this to punishment, this explicit connection does not fit with a progressive views of criminology or crime history so much of what we might see as criminology in the nineteenth century been ignored.[160] Lombroso and those like him have become "icons of 'scientific progress'" but they were not isolated thinkers.[161] More importantly, Lombrosian theories were not commonly known in Britain in the nineteenth century, having not been translated in to English.[162] Interest in criminal nature began earlier than the 1870s. I argue it can be traced back, at the very least, to Parkhurst in the 1830s and attempts made there to understand and reform criminal boys.

Instead of focusing on pioneers in criminology in this thesis emphasis is placed on the people working in and around prisons and it shows that these people were practicing sciences of the criminal for their own practical, rather than theoretical reasons. Davie sees some PMOs from the 1860s onwards as creating a criminological profession with themselves as the leading experts.[163] I show that PMOs were aiming not so much to create a new profession, as to understand the criminals in their care in order to improve the effectiveness of the prison service.

As Janet Saunders has shown in the mid-late nineteenth century there was an increasing tendency for contemporary observers to link paupers, criminals and lunatics together under the rubric of "deviancy".[164] As Garland and other Foucauldian historians have argued attempts were made in the prison to control criminals because they were seen as deviant, or even fundamentally different. For many contemporary observers the number of paupers, criminals, and their relatives who suffered from insanity, epilepsy or physical deformities was evidence that some groups of people were different or degenerate.[165] For PMOs, the possibility that there existed a group within society who were inherently criminal (by nature) presented a huge problem for the prison service, as it seemed to negate

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[160] Godfrey and Lawrence 2005.
[161] Becker and Wetzell 2009: 1.
[162] The first introduction was by Havelock Ellis in 1890 in an abridged and highly edited format.
[163] This argument is very similar to Scull's arguments on the professionalization of asylum doors. 1993: 232–244.
[164] Saunders 1983: 189.
[165] *Ibid:* 214.

the possibility of reforming prisoners within the prison system. As crime statistics grew and the prison did not seem to be reducing criminality in Britain, it became imperative to understand criminality and to adapt the prison system accordingly. This thesis shows what some PMOs were doing –which might come under the banner of what we now call criminology – was not mere academic interest but research undertaken for very practical reasons.

VI. Methodology and Sources

As has been discussed, there is less literature on prisons, prison medicine and British criminology than one would initially expect. Most histories of prisons are quite broad, covering long periods of time and including all types of prisons.[166] These narratives are useful, but in order to write a history of day-to-day concerns in prison health and sciences or crime and to assess some of the impact prison medicine had on the development of English convict prisons it is necessary to look at specific examples. Thus, a case study approach has been adopted in this thesis which builds on and enhances the current literature.

Agreeing with Forsythe, I argue that the Foucauldian and Marxist traditions have been too condemning of prison staff. As McConville has done for prison administrators, Forsythe has done for prison chaplains and Hardy did for William Guy in particular, this thesis shows there were a complex mixture of people, policies and motivations at play which cannot simply be reduced to power struggles.[167] By focusing on medical practice, previously underutilised archival sources and publications by PMOs, whilst minimising the focus on Foucauldian interpretation or the "Reports of the Directors of Convict Prisons", this thesis, as stated above, addresses the following questions. How did prison medicine change British prisons? Who was practising in prisons and how did their work contribute to medicine more generally? And, what role did prisons play in the development of criminology? Case studies are well established as helpful for social scientists when asking how or why questions as I am doing.[168] Although this work is based on historical and archival research, rather than social study, it is still the case for historians that, "the

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[166] With some exceptions such as Turner 1904; Leonard 1970; Duncan 1994, 2000; Hardy 1995; Davie 2010, 2016.
[167] McConville 1981; Forsythe 1987, 1990; Hardy 1995.
[168] Yin 1994: 1.

distinctive need for case studies arises out of the desire to understand complex social phenomena."[169] Case studies have explanatory as well as exploratory power.[170] In using case studies I am able to present "snap shots" of populations in time (although perhaps longer time periods than social scientists would usually advocate).[171]

In choosing a case study approach I have left out far more prisons than I have included and of course I have not covered all of the UK, all PMOs, or all-time periods. There is not as much diversity of geography or gender as I would have liked, and local prisons and hulks have not been addressed nor have institutions on the fringe of the prison system like bridewells, reformatories and reformatory schools: this thesis tells a story about convict prisons. The prisons addressed are all English. Located in London, Surrey and Wakefield these prisons reflect the decisions made in locating convict prisons by the government. There was a higher concentration of convict prison in the south of England than the north. Government convicts from Wales tended to be sent to England, so are not treated independently here, whilst Scotland was different, as it had its own distinct laws and medical practice and psychiatry moved at a different pace to England. Indeed, Scotland is in need of its own extensive study into prison medicine, as well as a comparative study, but such a comparison cannot be addressed satisfactorily in this thesis. The case studies chosen may not cover all of the UK geographically, but it is possible to use these case studies or sample sets to do research and successfully extrapolate to the larger population.[172]

Of course, case studies can be biased or altered to make specific points.[173] I have endeavoured to avoid this as far as possible, but in any case, the examples I present are to demonstrate the wider range of motivations and activities amongst medical practitioners in prisons than has hitherto been considered, not to argue that any given case study is wholly representative of all prisons. Similarly, it can also be difficult to raise generalisations from case studies.[174] This thesis does draw general points about the development of prisons, prison medicine and sciences of crime, but also draws conclusions about specific institutions. As Saunders argues "nuances in the patterns of deviance

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[169] *Ibid*: 1, 2-3.
[170] Cite Graham Allison 1971 on the Cuban missile crisis as an example of a single case
[171] Levy and Lemeshow 1991: 3.
[172] Levy and Lemeshow 1991; Stake; 1995; Hertzog 1996; Bryman 2016.
[173] Yin 1994: 9, 10.
[174] *Ibid*: 10.

treatment and control" can be found by looking at specific localities and institutions.[175] It is argued that the prisons, contra to intention, were all subtly different, and this is only revealed through a case study approach. Stake indicates that "a case study is expected to catch the complexity of a single case" and they can be used to demonstrate "uniqueness" and "commonality".[176] As with medical students who have long sought the "good" cases in the archives – the exemplars of a disease or illness – I have chosen exemplar prisons.[177] In doing so I have been able to tell complex stories about specific individuals, places and time periods highlighting specific details as well as contextual knowledge. As Damousi *et al.* indicates case studies "make complex discourses tangible."[178]

The prisons that are presented in this thesis have been chosen for two main reasons. The first is that these prisons exemplify specific medical concerns as well as prison 'firsts'. In each instance, the PMO was faced with specific problems caused by environment, managerial policy or the types of criminals in their care. In all cases, the challenges the PMOs addressed were not unique to them, their institution or the years they were working in the prison service, but they illustrate when and where these medical challenges were most prominent and changed the way that prisons were managed. The institutions picked were often 'firsts', but similar kinds of institutions were being built, and medical practice and research was taking place all over the country. Often the second attempt at something was just as experimental as the first.

The second reason for choosing these particular case studies is practical. My case studies were chosen because of the available primary sources. Less archival material survives than might be expected, and the available archive material represents only a small part of prison administration, debates, planning and medical practice produced. This thesis draws on the limited number of records, letters, note books and memorandums which survive. The sources used give the clearest access into the everyday practices of the prison staff and behind the scenes debates that influenced the development of the English prisons and medical practice therein.

Even within the limited archives, evidence from doctors themselves is often absent, so the examples chosen were in part dictated by the availability of such sources. The archives that do survive seem at times randomly selected, but reflect the values of the nineteenth–

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[175] Saunders 1983: 19.
[176] Stake 1995: xi, 1.
[177] Anderson 2015: 15.
[178] Damousi *et al*. 2015:2.

century prison staff and subsequent archivists who have preserved the documentation. It was with great regret that I was unable to find any surviving PMO's daily record books from a convict prison, but there are regular reports written by the governors, chaplains and PMOs. In addition, entry logs, directors' and chaplains' books, letters, publications, photographs and prisoners' individual record sheets and newspapers give us enough information to know what PMOs were doing and why.

Historians have inevitably drawn heavily on the Reports of the Directors of Convict Prisons (RDCP), the most accessible, extensive and consistent of sources relating to nineteenth–century prisons. These reports include comments from the governors, chaplains and medical officers of each prison at the end of each year. Nevertheless, the only active choice to exclude material I made was to not focus on the annually published RDCP. This choice was made because many of the histories we currently have use the RDCP as the only (or nearly only) primary resource.[179] By looking at other sources it is possible to get a broader picture of what happened behind closed doors, and beyond the publicly available reflections and statistics included in the reports. Moreover, legislative changes were often the result of changing practice within the prisons rather than higher level discussions. Regularly the legislation was playing catch-up with practice or had little immediate consequence in the convict prisons. The changes made were usually a reaction to a problem or to deal with medical implications of ideologically informed activities.[180]

The chapters of this thesis centre on specific places with specific health problems, which are arranged thematically and overlap chronologically. All issues covered remained prevalent throughout the period but have been highlighted when and where they were of most concern to PMOs and prison authorities. Select examples allow for detailed study of individuals, particular prisons and specific health concerns, while reflecting the challenges that faced all English convict prisons. The intention here is not to write a general history of medicine in prisons, which would have entailed losing the detail and masking the complexity of this emerging system. There have been some case studies of individual prisons in England previously, but they have not been used to explore how individuals or health changed the prisons.[181]

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[179] Davie 2005, 2010a, 2010b, 2010c, 2016; McConville 1981, 1995, 1998; Sim 1990; Priestley 1999, Hardy 1995.

[180] Robinson 2013: 18-36.

[181] Davie 2010, 2016 (Brixton, Parkhurst); Leonard 1970 (Wormwood Scrubs); Duncan 1994, 2000 (Wakefield, Pentonville); Stockdale 1997 (Bedford); Forsythe 1983 (Exeter).

The first half of the experimental era was dominated by decisions to separate children from adults, and then women from men. The aim was to create a healthy prison population free from epidemic diseases which could be productive and efficient. Chapters 1 and 2 discuss some of the institutions and medical men that faced these challenges. The second half of the period, discussed in chapters 3 and 4, forced doctors to focus on different types of people with different types of illnesses and criminal labels. In particular, these chapters focus on mental illness and psychological understandings of criminality. Record keeping and the advent of photography show how the prisons were forced to acknowledge the different types of people in the system and attempts to quantify and categorise them. In each chapter, a history of the institution and the key individual working there is offered before attention turns to the specific medical, professional and ideological challenges they faced.

It is worth noting here that there are two chapters I would have liked to include in this thesis which were not possible because of the unavailability of primary sources. The first is the story of the juvenile boys sent to Parkhurst Prison on the Isle of Wight in preparation for transportation to the colonies, and the second is on the women (and their infants) in Brixton Prison, Britain's first all-female convict prison. These two case studies, if fully developed, further demonstrate the necessary separation of different categories of people, in these cases by sex and age. There is much more to be said about the understanding of juveniles and how this links to changing notions of childhood, children's medicine and child psychology, but the primary source material was unfortunately unavailable for a complete survey of Parkhurst, Britain's first juvenile convict prison, or Brixton, Britain's first women-only prison.

Parkhurst was one of the first decisions made by the convict prison directors to distinguish a specific type of convict. This was also, I believe, one of the first acknowledgements of "childhood" being different from "adulthood" and an acknowledgement that younger people needed to be treated differently, and sometimes protected from adults. As Story argues "The most proactive measures for the reform of convict felons in the nineteenth century were those aimed at child criminals."[182] Newspapers and Christian publications were full of stories about juvenile offenders and a complex system of preventative and reformative institutions were built over the nineteenth century.[183] Parkhurst Juvenile

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[182] Story 2011: 34.

[183] See Parslow 1978; Shore 2002; Horn 2010; Johnston 2015; for some of the discussions on juvenile criminals.

Prison opened in 1837 and remained a juvenile prison until 1864, a unique institution for young criminal boys. At present the nineteenth-century archives are inaccessible, and the Isle of Wight Record Office and Archive is, despite the staff's best efforts, unable to locate them. I believe they are still inside the prison or have been taken into private custody. Records are known to have survived at least until 2000, when prison officer Brian Manser published *Behind the Small Wooden Door: The Inside Story of Parkhurst Prison.* The lack of these primary sources means it is difficult to tell a new story about prison medicine and health in Parkhurst when it first opened.

In 1853 Brixton Prison, Britain's first all-female convict prison opened. In response to the realisation that, within the prison system women required different work, moral training and medical care, Brixton attempted to create a new spin on the Pentonville model specifically for women. Brixton is particularly interesting as it shows that barely ten years after the opening of Pentonville, a new prison model needed to be developed in response to physical and perceived moral differences in people; a new experiment was needed for female convicts. In 1962 Ann Smith observed that very little attention had been paid to women in prisons and that few recognised that men and women had different experiences. Only six full accounts of prison life written by women were identified.[184] Indeed, you will notice as you read this thesis that there are not many women. Some histories of women have been published in response to Smiths call.[185] The deficit of women and children in convict prison histories in part due to the lack of original accounts, but is primarily because the medical reports, doctors, prison directors and Joshua Jebb focused on men. The availability of sources dictates that male prisoners often come to the fore. There were fewer female than male criminals in both local and convict prisons, but one in five of the criminal population was female.[186] Mostly women were charged with petty theft, offenses against the person, drunkenness, and prostitution, but the Victorians feared female infanticide, baby farming and murder almost above all else. Women are hidden in the

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[184] 'Prison Matron' (1862, actually Francis Robinson a male journalist), Lady Constance Lytton (1914, a suffragette who sometimes disguised herself as a working-class woman called Jane Warton), Dr Mary Gordon (1922, appointed as the first English Lady Inspector of Prisons in 1908), Joan Henry (1952 and 1954, Prisoner), Cicely McCall (1938, a prison officer) and Mary Size (1957, a prison governor). Smith 1962: ix; An additional example I have been able to find was Susan Willis Fletcher who published twelve months in an English prison in 1883-4. She was an American women who was convicted of fraud because she was a spiritualist medium and spent twelve months in Westminster Prison. Fletcher 1884.

[185] Dobash *et al*. 1986; Zender 1991; Forsythe 1993; Davie 2010; Schwan 2014. Studies in other nations include Freedman 1981 (USA); Rafter 1985 (USA); Daniels 1993 (Van Diemen's Land); Knepper and Scicluna 2010 (Malta); Salvatore and Aguirre 1996 (Latin America).

[186] Zender 1991.

primary source material, as is the case when looking for working-class women in other spheres. The prison experiment used male convicts as the archetypal person and women, in part because they were fewer in number, in part because of perceived gender roles and norms, often disappeared into the shadows.

It will be shown in chapter 2 that Pentonville had been intended to resolve any and all problems there were in the convict prisons. It was designed to be architecturally perfect for health, punishment and reform, but, the system was trialled on young men who were considered mentally and physically healthy. It became apparent that the Pentonville system did not quite fulfil expectations. The Pentonville model did not work for all groups of convicts and the desire for total uniformity was abandoned for a softer version which sought a fair and consistent system but with adaptations for different groups of people. It had already been noted as far back as the 1830s that young offenders should be treated differently to adults. There were some striking similarities between the separation of children and women from male convicts, and a tendency infantilise these groups of people. Nevertheless, it was acknowledged in the prisons that women and children needed different forms of punishment and different types of medical care. These considerations meant new prison experiments had to be trialled. It is with great regret that they could not be explored in full here.

VII. Thesis Outline: Examples in English Convict Prisons

Across the world over 300 prisons have been built on a radial plan similar to that designed by Joshua Jebb at Pentonville.[187] All were architecturally similar, employed ex-military men, were part of an inspectorate system and participated in consistent systems for administration. Incremental changes in legislation and prison management demonstrated the drive towards unachievable uniformity. As stated, this thesis argues that medicine, health and theories about criminals developed by PMOs played a major role in creating and shaping the British convict prison system. Medicine influenced architecture, management, philosophy/politics, science, medical practice and understanding of criminals. The changes in legislation and policy over the period were heavily informed by medical concerns and the need to manage health. The emphasis of this thesis is on medical practice, doctors, and categories of criminals. The convict, or patient, experience undoubtedly needs further exploration by historians, but this thesis aims to shed light on

[187] Steadman 2007: 24.

how the modern prison system developed because of experiments and decisions made about health and medicine.

The thesis begins in chapter 1 with "epidemic disease and the role of the PMO". William Baly (1814–61) is perhaps best known now for translating Johannes Müller's *Elements of Physiology* into English, but in 1839 he was appointed to report on health at Millbank Prison following a series of epidemics, becoming the permanent medical superintendent in 1841. Baly's work at Millbank helped to shape what prison medicine was and how it was managed. During his time at Millbank Baly researched epidemics and sanitation and sought to control diseases, which were rife in the prison. Millbank was the first convict prison and consequently perhaps the most disastrous. Repetitive bouts of disease had to be treated, but lessons were learnt for subsequent prisons and also for wider public health movements. Baly shaped the role of the Victorian PMO during his time at Millbank, making the PMOs essential to prison management.

Chapter 2, "clarifying the rules and managing bodies", looks at Pentonville Prison, the primary site for experimentation and the official "model" for the convict service in England. Pentonville opened in 1842 to combat the health (rather than disciplinary) problems that had emerged at Millbank. Pentonville trialled "separate confinement" on a large scale in order to test theories about confinement, diet, exercise and the differences between prisoners and the rest of the population.[188] The prison was designed to be healthy for mind and body, but it was found to need modifications. These were almost all heavily informed (or sometimes limited) by medical considerations. As this chapter shows, the health of prisoners dictated how they could be punished through diet, labour and exercise. Pentonville was the model for all later prisons and its policies were shaped by considerations for health, rather than punishment and penal philosophy.

Chapter 3, "mental illness and categorising criminals", concentrates on the convict lunatics held at Woking Invalid Prison, which was overseen by PMO John Campbell. A career PMO, Campbell's book (1884) and work carried out at Woking Prison are used to demonstrate the complexity of defining and treating mental illness in the prisons in the 1860s–1880s. Woking highlights the increasing need felt by PMOs to label classify their patients. Unlike Broadmoor Asylum, Woking was built for uncertified criminal lunatics and physically disabled convicts. Based on contemporary, but arbitrary boundaries, the convicts in Woking were meant to be less mentally ill and less dangerous than those in

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[188] Jebb 1844.

Broadmoor. In the cases of mental illnesses, the convicts at Woking were often seen as being on the borderland between sanity and insanity.[189] This chapter explores the different types of criminal and criminal lunatic identified in the 1860s and 1870s by PMOs and shows that these classifications shed light on "the criminal mind" to contemporaries, and nineteenth-century understanding of insanity and criminality for the historian. It further demonstrates political conflicts in prison and asylum management.

The fourth and final chapter of this thesis, "brains and scientific medicine", follows PMO Henry Clarke, who joined the West Riding House of Correction in Wakefield in 1876. Clarke was interested in craniology, neurology and psychiatry, researching these fields in the prison and the nearby West Riding Lunatic Asylum. Clarke was the most overtly scientific of the PMOs considered in this thesis, and he shows how research and concerns of medical officers had changed by the end of the experimental era. This chapter demonstrates how essential the prison was as a place of medico-scientific research. It is also argued that the brain science and crime studies Clarke and others like him engaged in was *not* criminal anthropology or criminology, but they were exploring sciences of criminals. As discussed, historians have argued that criminology in Britain, in this period, was Lombrosian in character but this chapter shows that was not the case and the definition of what counts as criminology before it was a discipline needs expanding, with prisons shaping the sciences of criminality, record keeping and policing repeat offenders. In order to explain criminality and administer the prison system, convicts were observed and data was collected by all PMOs. Prison staff and PMOs were very involved in the burgeoning discipline of statistics and many belonged to the Statistical Society. Data collection will be referred to throughout this thesis, but discussed in more detail in chapter 4.

Throughout the period, the prison authorities sought uniformity, but this proved elusive. Prison experimentation was most fervent in the late 1830s and early 1840s with the opening of Parkhurst Juvenile Prison and Pentonville as the model prison, then again in the early 1860s when new rules were introduced to make the prisons more punishing and more economical. Convict women and the insane were moved to new, specialised institutions when it became apparent that they could not be treated like able-bodied, 18–35-year-old men. It was easy to move women into different spaces because they were a straightforwardly defined group, but criminal lunatics were much harder to define. Who counted as fitting into the category was more challenging; diagnoses from weak-

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[189] See Showalter 1987 for discussion on "borderlands" in asylums.

mindedness and imbecility to delusional insanity and mania might be eligible, but how to decide who was ill enough to be labelled insane and thus be exempt from hard labour? The prison authorities struggled with this, and even in the late 1870s when provisions for insanity had been in place for almost two decades it was still unclear who was insane and who was just criminal. The process of heading towards the nationalisation of the prisons had made most convict prisons quite uniform and despite problems with applying consistent rules, most prisons were becoming similar.

PMOs and the PMS are at the centre of this thesis. They represent a distinct body of medical expertise responding to national health concerns and the specialised problems thrown up by the prison system. The medical treatment and categorisation of seemingly ’abnormal' people highlighted the need to understand and change health, diet, hygiene, labour, punishment and treatment of the insane or physically disabled. This thesis shows that the development of the prison service in England was complex and messy, but shaped by health concerns and medical and psychological research. PMOs were much more closely associated with the medical establishment than has previously been acknowledged and made significant and important contributions to medicine which should not be forgotten by the history of medicine. Finally, it shows that the PMOs contributed significantly to our understanding of criminality in a uniquely English way. Their research subjects were the convicts in the national prisons; the PMOS helped define what a criminal was, but they also shed light on the health of the body, mind and morality of the nation, particularly the working poor and the so ccriminal classes.”

Chapter 1.
Epidemic Disease and the Prison Medical Officer: William Baly and Millbank Penitentiary 1839–1859

> *All the cells are well ventilated, and the prison generally is kept scrupulously clean, but the site of the building is low and marshy, and although enormous sums have been spent in draining and improving the soil, its dampness still renders it very unhealthy…*[190]

I. Introduction: The First Modern Convict Prison

Victorian prisons have been characterised in popular literature and film as cold, damp, and silent.[191] The idea of the prisons as places of punishment, hard labour, cruel guards, intense labour and unbalanced power dynamics has been pervasive and long lasting. In part, this is thanks to Michel Foucault, but also Victorian novelists, and nineteenth-century "realistic journalism", aided by the wealth of health-and-death-related statistics which came out of the institutions, associated media reports, and prison-based novels and biographies. Millbank Penitentiary in London was the first government prison to open in 1816, and began producing data that helped to create and perpetuate the Victorian prison stereotype. As with most heavily populated spaces in nineteenth-century Britain, Millbank saw its share of disease, which was compounded by the close proximity of the people, poor living conditions, and diet, but improved by managing sanitation and ventilation. It has been suggested that infectious diseases were prevalent in prisons throughout nineteenth century and that it was not until the 1880s that this problem began to be addressed.[192] Prisons have not been properly examined by historians as places for medical or scientific research, but this chapter shows that, from the late 1830s, the prison provided a laboratory space to study individuals and medical problems. In particular, the chapter focuses on the medical attention given to the causes, transmission and treatments of epidemic diseases, notably dysentery and cholera. Repetitive and continuous health issues at Millbank worried the

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[190] Mayhew and Binny 1862: 238.
[191] For example Charles Dickens' *Little Dorrit* 1855–1857.
[192] Higgs 2013: 37.

government and prison management who did not want to be seen actively injuring people under their care, even if they were convicts.

William Baly was the superintending PMO at Millbank from 1842. As was common in the prisons, Baly was unable to keep disease out of the building but he did work to improve conditions and to understand the causes of disease, work which would influence prison medicine for the rest of the nineteenth century. Baly had the advantage in Millbank prison, unlike many other enclosed spaces, that disease could be controlled through the infrastructure of the buildings and managing the people inside them. Convict prisons therefore provided a space to research responses to disease. In this chapter Baly's medical work is placed in the context of his contemporaries, showing that our current understanding of early Victorian epidemiology is deficient in not considering medico=-scientific work in civic institutions.[193] The history of Victorian epidemiology often traces the spread of diseases (especially cholera) but rarely comments on how medical or scientific men (beyond famous names like John Snow and Robert Koch) sought to understand the diseases in order to address them. Baly's knowledge of dysentery and cholera were not just academic interests, but necessary to keep the prison population healthy. Baly's situation was not unique; medical officers in prisons and workhouses, as well as sanitary inspectors and hospital staff, were challenged by spreading diseases and epidemics. The experience shared by medical men (and nurses) dealing with epidemic disease across the country has thus far excluded prisons. Baly's work also contributed to public health as epidemics tore through Britain's urban spaces.

This chapter does not suggest that Baly solved the problem of epidemic disease control in institutional spaces. Rather, it highlights that he contributed to early research, in methodology, theory and practice. He helped raised concerns about how to manage disease as institutions, such as asylums, workhouses, and later lock hospitals, industrial schools and reformatory schools grew in number, along with increasing numbers of confined factories and urban living. In doing so, the chapter demonstrates that the prison and the PMOs were part of a larger nexus of professionals in a wide variety of institutional spaces that contributed to the practical management of epidemics, worthy of attention alongside the more famous examples that have been well studied.

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[193] For examples see Briggs 1961; Creighton 1965; Pelling 1978; Hardy 1993a; Bynum 1994; Watts 1997; Holland et al. 2009.

The challenges Baly faced at Millbank are central to understanding the role of the PMO in the nineteenth century and the responsibilities they had towards the prison system and the government, which were parallel and sometimes contradictory to their responsibilities as doctors to improve health. Evidence from the prison challenges current understanding of how, and more importantly where, medical knowledge was, or could be, generated. This chapter argues that Baly shaped what a PMO could be. He was present at the start of the new medical specialisation, and actively shaped what the role of PMO could be, which included it having a research element alongside maintaining health. Baly became a model for PMOs, not a brilliant exception. The way Baly practised was reflected in other institutions, most notably Pentonville and Wakefield which both opened in the 1840s and developed using Millbank's disciplinary system and architecture for guidance. Subsequent Millbank PMOs were also regularly called upon to advise government and other prison staff because of the way Baly fashioned the role of PMO and the place of Millbank in the prison system.

This chapter begins in section II by outlining the architectural and philosophical underpinnings of Millbank Penitentiary and argues these decisions affected health, particularly epidemic disease as evidenced through prison reports and Baly's notes. Epidemics were the greatest concern for both the staff and the prison. The subsequent lessons learnt from errors and successes at Millbank influenced many aspects of future prison design, like architectural detail, and will be evident in all of the prisons discussed in the thesis. Section III introduces William Baly, Millbank's chief PMO. Drawing on Millbank's prison records and Baly's surviving letters at the Royal College of Physicians, it argues that Baly shaped what prison medicine could be. He made the PMS central to all subsequent prisons, contributing to the creation of the modern PMS. Section IV then looks at the relationship between Millbank and public health. Using Baly's published works and government correspondence concerning Millbank, this section argues that Baly was a medico-scientific researcher as well as a PMO. He showed that prisons could be places for medical research, an idea taken up by many other PMOs. Millbank was the first attempt at the convict prison experiment, it was fraught with problems and through necessity became a place for medical research.

II. Millbank Penitentiary and Disease, 1839–1859

Millbank Penitentiary was Britain's first purpose-built government prison, the first convict prison, and the first national prison. It was built with awareness of Jeremy Bentham's utilitarian philosophy and panopticon design. As will be shown in subsequent chapters Millbank provided an archetype for all subsequent English prisons' architecture, managerial structures, punishment methods and healthcare provisions, as well as impacting on policy and architecture for asylums and workhouses. Although Millbank was designed to be a perfect prison it was troubled by with structural, financial, managerial, and health problems. Until its closure in 1890 the prison was continually blighted with epidemic breakouts including cholera, scrofula and dysentery.[194] Disease was particularly problematic in the prison's early years and needed to be addressed, or at least partially understood before the convict prison system could be rolled out in earnest.

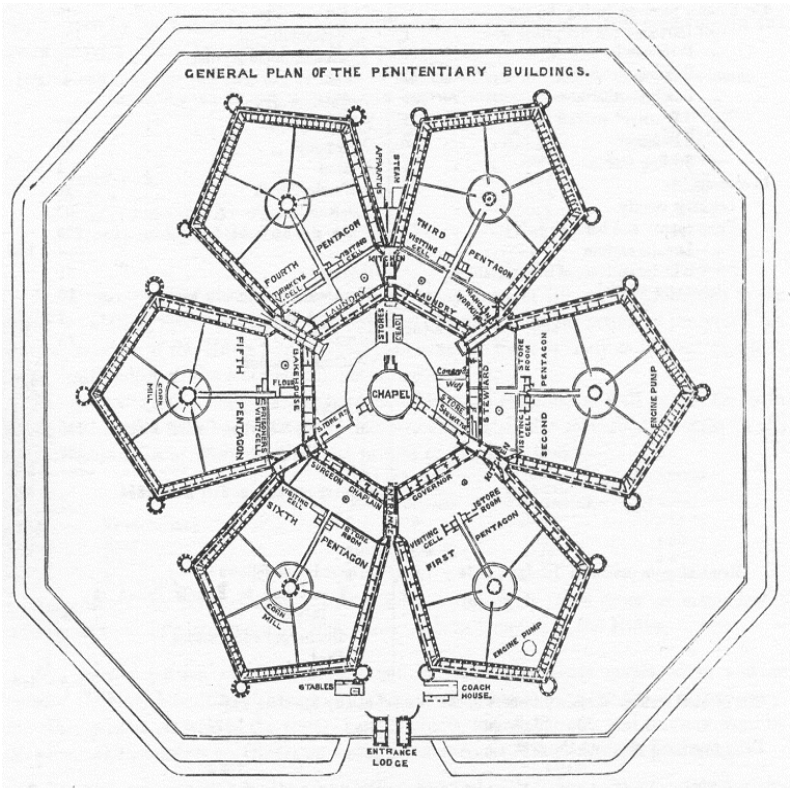

Figure 1.1 Millbank Penitentiary plans 1812–1821.

William Williams and Thomas Hardwick. From Mayhew and Binny 1862: 237.

[194] The prison ceased to hold inmates from 1886, was closed in 1890 and demolition began in 1893. Brodie *et al.* 2002: 60. Scrufular is now considered to be a form of tuberculosis.

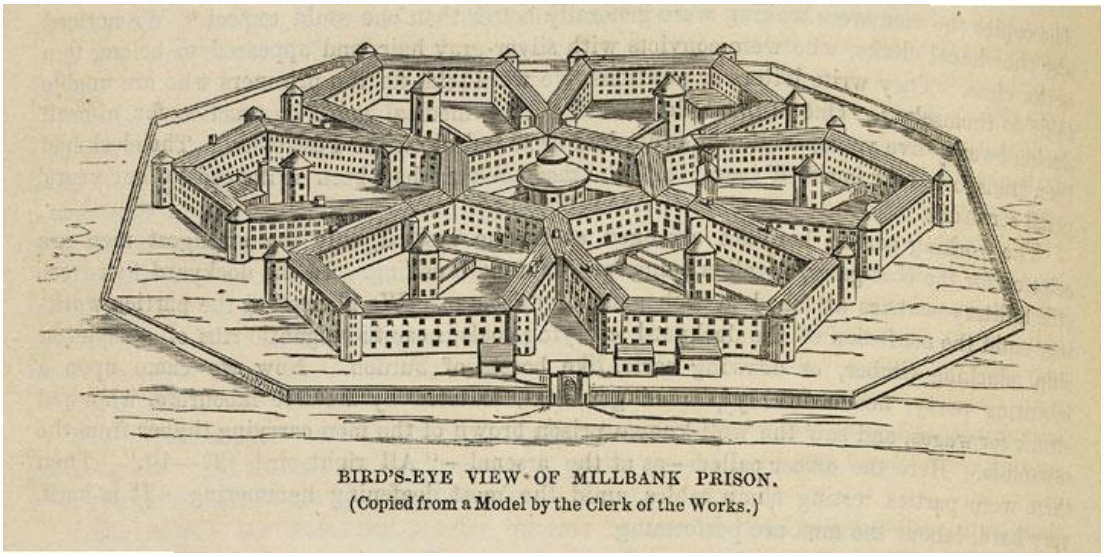

Figure 1.2 Birds-eye view of Millbank Prison

Mayhew and Binny 1862: 232.

The architecture at Millbank accounted for many of its health problems. In 1850 Milbank was described as "a mass of brickwork equal to a fortress."[195] It "look[ed] like a six-pointed star fort … built, say, against catapults and old fashioned engines of war." As with all subsequent prisons "The central point [was] the chapel," in this case "a circular building….A building, three stories high, and forming a hexagon, surrounds the chapel, with which it is connected at three points by covered passage." It also served to remind convicts and guards of the omniscience of God. "[The chapel] is the centre of the circle, from which the several bastions of the star-fort radiate. Each of these salient shapes is a pentagon, there are six of them, one opposite each side of the hexagon…."[196] As an extra line of "defence" it also had a moat. Figure 1.1 and Figure 1.2 show the external walls formed an irregular octagon covering sixteen acres of land and illustrate the layout of the prison. The intention was that convicts, and guards, would all believe they were under constant observation so would adapt their behaviour appropriately.[197][198] Bentham believed, and the British prison system generally accepted, that the panopticon prison

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[195] Cunningham 1850: 337.

[196] Griffiths 1884: 26; Griffiths was later deputy governor of Millbank.

[197] Bentham envisaged (but Millbank did not include) "conversation tubes" where the guards could talk to inmates in their cells and immediately reprimand them. UCL Bentham Project, 1999-2017.

[198] The prison staff did at least escape the panopticon, they lived on nearly Ponsonby Street rather in the prison itself. They drank at the Morpeth Arms – which still trades next to the Tate Britain It is believed that the passages under the Morpeth Arms were sometimes used to move criminals from the prisons to the boats on the Thames for transportation so they could not be seen by pedestrians who might attempt to attack or free the inmates. Local legend has it that the pub and its passages are haunted by ghosts of convicts and their guards who passed through.

would reform morals, preserve health, encourage an industrious nature, reduce costs, deter further offences, deter other offenders, and stop the corruption and bribery that was rife in eighteenth century gaols. Many felt Bentham's project was unwise and impractical, but the Government agreed to his scheme with some modifications.[199]

Bentham's vision for his panopticon was never realised. He wrote that the British government ruined his prison design and "murdered my best days".[200] There were many compromises in the design, most caused by the inappropriate site. Not many people in London wanted a convict prison in their midst at a time when criminals were commonly sent abroad or executed. Eventually a small boggy area at the side of the River Thames, known as Millbank, was purchased and plans were developed to build the penitentiary. Bentham ultimately took a step back from Millbank and the structure was designed by committee. The original plans were drawn by William Williams, whose design for the prison was chosen by public competition. The project was then developed by Thomas Hardwick, who subsequently resigned in 1813, meaning the scheme was to be finished by John Harvey. Harvey was in turn dismissed and replaced by Robert Smirke, who finally finished the structure in 1821 although convicts had been there since 1816.[201] None of the men involved were aware of the potential hazards to health in their continually changing designs.

Millbank was originally intended to be a place of reform (rather than just punishment) for convicts with sentences up to two years in length (although some stayed for up to six years). Convicts were initially kept in seclusion before being allowed to work in small groups to encourage industriousness.[202] From 1842 to 1852 it became a "convict depot", a holding pen for those destined for transportation to the colonies, such as Gibraltar, Bermuda, or Western Australia.[203] The prison kept them in separate confinement, attempted reformation of character, and encouraged repentance before sending them away. After 1842 those who showed promise of redemption (or signs of insanity) might have been transferred to a different prison instead of being transported.

Despite the careful planning and Benthamite principles, Millbank struggled to fulfil its aims for four major reasons. First, the greatest challenge, and perhaps the most

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[199] Smith 1962: 86.
[200] UCL cxx: 466.
[201] Edwards 2006: 179.
[202] Brodie *et al.* 2002: 60.
[203] Cunningham 1850: 337–338; Mayhew and Binney 1862: 241.

unsurmountable, was location. The prison was built on the edge of the Thames in an area of land that was unwanted because it was so marshy. The moat brought Thames water in but did not take it out, so waste gathered and possibly affected the water supplies and the soil in which food was grown. The site and construction of Millbank made it damp and cold. In addition, the structure was prone to subsidence. This was eventually solved by Smirke who effectively floated the prison on a concrete raft. This solution worked, but almost doubled the cost of construction so corners were cut in other places.[204]

The second problem was the design. The issues with the site and the continual reorganisation of the architectural team meant that the design was changed and construction standards were poor. The first convicts, a group of thirty-six women, arrived in June 1816. Within three months of their arrival, flaws in the construction of the building were apparent, such as it was. Three towers had to be demolished and rebuilt. By 1819 the prison could still only hold 103 men and 123 women.[205] It was believed that parts of the building did not need to be as strong as others. Pentagons 3 and 4 were built for women and were "of slighter construction", did not have vaulted ceilings and the grated iron gates were "less massive". Assumptions about the fragility of women led to the belief that the female wings to be less strong than the men's, so build and material quality was compromised. Unfortunately, "the female convicts throughout the prison are pronounced 'fifty times more troublesome than the men.'"[206] Another design issue was the labyrinth like nature of the corridors within the building; wardens often got lost. It was reported that one elderly warder, who had been employed at Millbank for a number of years and promoted accordingly, always carried chalk with him to "blaze" his route "as the American backwoodsman does the forest trees."[207] Even more irritating to the governor than his wardens getting lost was the fact that the ventilation system carried sound so prisoners could communicate with ease and completely undermine the philosophy of the separate system (see chapter 2 for how the separate system was supposed to operate).

The third problem was the management structure within the prison. In the 1830s, it was decided that prisoners could not be trusted, and that there would be more rigorous separation than before. The prison became less reformist. More incidents of misconduct were reported and the governor resigned in response to the changes implemented by

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[204] Edwards 2006: 179.
[205] Brodie *et al.* 2002: 60.
[206] Mayhew and Binny 1862: 245–6.
[207] Griffiths 1884: 27.

committee. From 1837 the prison chaplain, Rev Daniel Nihill was also the governor—it had been he who had suggested many of the changes.[208] There were often complaints about cruel treatment and reduced diet, enforced because Nihill believed in austerity and severity. He was accused of being overly zealous with his religious convictions and of causing illnesses associated with malnutrition. Although he himself wrote that if an epidemic could be traced to "scantiness of food", "woe to the reputation of the persons charged with the responsibility of its management!"[209] In 1843 Nihill left Millbank when it converted into a convict depot.[210] He was accused of allowing or causing abuse within the prison because of his "zeal".[211] Nihill had prioritised what he saw as Christian morality over bodily health.[212] When Nihill left this prioritisation stopped, the governor's position was taken over by Captain John Groves who managed discipline and there a separate clergy was appointed, creating some separation between discipline and religion. Almost all prison governors after Groves were ex-military, usually of non-commissioned rank, and from then on, the church and discipline were separating in prisons. Groves held the governor post until 1854 when Captain Mark Gambier took over.[213]

The fourth, and most newsworthy and most concerning problem for Millbank's staff and government officials, was its propensity for disease. By the 1820s Millbank was almost uninhabitable thanks to disease. In 1822-23 a dysentery epidemic led to the decision to release almost all the women in the prison, and send the men to prison hulks in Woolwich, where most were reported to have recovered considerably despite hulks being generally considered dangerous and unhealthy places.[214] Whilst the prison was empty it was whitewashed and the ventilation improved at great cost. Despite this, the prison quickly became a place of controversy because of the poor health standards; in 1823 the inmates began to suffer from scurvy, and thirty-one people died.[215] The physician, Dr A Copland

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[208] McConville 1981: 164.

[209] Nihill 1938: 18.

[210] McConville 1981: 168. This change at Millbank did not have significant impact on the press but changed how Baly could work.

[211] McConville 1981: 9; See for RCP.MS-BALYW/715/300 for an example of an accusation.

[212] Johnston 2015: 108.

[213] RCDP for 1854: 87.

[214] The remaining women were sent to a Hospital in Regents Park then onto Hulks. Thomas 2010: 108.

[215] Sim 1990: 17; McRorie Higgins 2006, argues that scurvy was actually very uncommon in nineteenth century England. In 1823 he believed the problem was a spread of disease caused "by direct contamination of food, probably from a carrier, who in all likelihood was one of the female kitchen staff since the disease continued among the women even after their removal from the penitentiary." He suggests "there are a large number of possible food- and water-borne agents, including perhaps most probably amoebic or bacillary dysentery or campylobacter." If correct, the reduced diet did not cause the disease but it certainly did not help improve it.

Hutchingson, and Nihill, had cut the inmates meagre diet down further in response to outside calls for harsher punishments and because of Hutchingson's belief that prison diet was "rather too much."[216] Following the scandal Hutchingson was removed from his post in 1823, and replaced by two external physicians, Peter Mere Latham and Peter Mark Roget.[217]

Latham and Roget were asked by the government to undertake the investigation of an epidemic disorder then rife in the Millbank Penitentiary. They found the epidemic to be a combination of scurvy and dysentery, which they concluded was due to an insufficient diet. They recommended for the prisoners at least one solid meal a day, better bread, and three pounds of meat every fortnight. Latham saw that the changes to diet and punishment as essentially an "experiment" carried out by doctors on inmates' bodies and minds.[218] He wrote "how much and what quality of food will actually suffice for [nourishment and health and nothing more] can be deduced only from numerous and careful experiments. But no such experiments as far as we know have ever been made."[219] Dr Wade, an assistant PMO, attempted to use diet to improve health during the 1833 cholera outbreak writing "I think I have done some good… by giving wineglassfuls of hot brandy-and-water; or two-drachm doses of sulphuric ether in an ounce of camphor mixture, or scruple doses of subcarbonate of ammonia in an ounce of the same mixture; or a drachm of the tincture of capsicum [pepper] or tincture of ginger in an ounce of cinnamon water, pretty frequently."[220] His experiments with diet were not systematic, and drew on his experience, homoeopathy, and mainstream medicine.

In 1833 there was another bout of what was apparently scurvy, judged to be caused by a further reduction in diet provisions, despite Latham's warnings. It was compounded by other digestive diseases, causing a number of deaths.[221] The prison was again emptied and the convicts temporarily moved to hulks on the River Thames. This only took place after a number of deaths, as the government and prison management had maintained that the site was healthy. A parliamentary committee described as "that great panacea for all public ills" by a later governor, had reported "favourably" on prison health. "They had declared that no case of local unhealthiness could be made out against [Millbank]", nor had they

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[216] Sim 1990: 17..
[217] Latham 1815; Sim 1990: 17.
[218] Latham 1815.
[219] Latham 1825: 14.
[220] Wade 1832: 145. Drachm (drm) are now unused measures approximately equivalent to 1.8 grams.
[221] McRorrie Higgins believes it was not scurvy. 2006: 513–53

been able to find "anything in the spot on which the penitentiary is situated, nor in the construction of the building itself, nor in the moral and physical treatment of the prisoners confined therein, to injure health or render them particularly liable to disease".[222]

The end of the 1830s saw an increase in dysentery, although the prison population was in "remarkably good" health at the start of 1840.[223] "Only" six prisoners had died in the previous year (three from consumption, two from typhus fever, and one from lung disease).[224] Until the 1830s dysentery, scrofula and scurvy were the biggest health challenges for the staff at Millbank, these were supplemented by cholera in the 1830s and later typhoid. It was an outbreak of dysentery that in 1839 brought the surgeon William Baly to the prison.[225] By the end of 1840 the disease had returned and would soon be considered an epidemic. In 1841 Baly was appointed medical superintendent to combat the ongoing threat of disease. In 1843 Millbank's title as the "national prison" given to the newly opened Pentonville Prison. Pentonville was an attempt to correct many of the organisational and architectural errors that had beset Millbank.[226]

When Baly joined, the governor was still Rev. Nihill, who believed in spiritual reform and opposed Baly's mission to improve living conditions and diet. Nihill saw dysentery as a punishment from God, a sentiment Baly did not share. Baly believed that disease was imported from other prisons but pointed out that dysentery was prevalent in London generally.[227] He was concerned that prisoners had insufficient diet and suffered from cold and damp, and that poor air led to spread of disease in the prison. As well as holding that dysentery was imported from other places, which fed the epidemics and undermined his efforts. Baly also believed that inmates were susceptible to disease as their bodies, and more importantly their minds, were weakened by long imprisonment. He was worried therefore, when a "gangrenous form of dysentery" at Millbank which usually attacked "the weakest subjects" killed three "apparently healthy men."[228]

The prison saw epidemic dysentery, accompanied by fever and inflammation, in January 1840. This became increasingly frequent in February into the middle of March. George Burrow, from St Bartholomew's Hospital, was drafted in to help at the height of the

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[222] Griffiths 1884: 90.
[223] Report of Committee of General Penitentiary at Millbank, 1840.
[224] *Ibid.*
[225] RCP.MS-BALYW/716/265. *Letter referring to Millbank.* 6 January 1840.
[226] Millbank Prison Act 1843.
[227] Baly 1847: Lecture 1.
[228] *Ibid*: 20.

epidemic. By the end of March, the epidemic started to debate, ending in early April. In July, the epidemic returned following several months of good health in the prison. This epidemic continued until October when there were some very severe cases. Health gradually improved over the following two months to its usual standard. Over the year 291 prisoners were admitted to the infirmary with dysentery, nine (seven males, two females) died.[229] It surprised officers that "the disease when most prevalent was not confined to the prisoners, but attacked many of the Officers also."[230]

The spring epidemic was confined to the prison, not the surrounding area, even in neighbouring Westminster. The autumn, however, saw dysentery, cholera and diarrhoea across the capital and by the end of September 649 people had died in the city.[231] In September 1840 Baly wrote that he had "shifted off 180 female convicts" to a transportation ship, though eight hundred people still remained at the institution but "very few" were sick.[232] Baly had written a report for the Secretary of State on the subject and was anxious to complete the translation of German physiologist and comparative anatomist, Johannes Müller, that he was working on, so he could focus on his preparation of a statement he was to give before Parliament. This marked the start of his involvement with government.[233] The report "by direction of the Committee and under sanction of the Secretary of State…made extensive enquiries with a view to ascertain whether the late epidemic is to be attributed to any noxious influence in the locality of the prison." Baly reported that, excluding epidemic disease the annual death toll of prisoners was "below average" totalling twenty, despite opposite being expected "owing to the extraordinarily large number of prisoners admitted in 1840."[234]

Repetitive and continuous health issues at Millbank worried the government and prison management who did not want to be seen actively harming people. In the early to mid-nineteenth century general civil unrest was enough of a concern without igniting more protests on the streets or within the prisons themselves. The continued attempts to rebuild, repaint, re-ventilate and generally revamp prison buildings, sanitation, diet and healthcare did not seem to be effective. Epidemic diseases challenged the knowledge and skill of

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[229] Report of the Select Committee of the General Penitentiary at Millbank 1842: 103–104.

[230] Anon 1843a: 140–141; Report of the Select Committee of the General Penitentiary at Millbank 1842: 103–104.

[231] Compared to an average of 277 a year for the same periods in 1838–1841.

[232] RCP.MS-BALYW/715/268. *Letter from Baly to his Father*. 21 September 1840.

[233] RCP.MS-BALYW/715/268. *Letter from Baly to his Father*. 21 September 1840.

[234] TNA.HO.45/388 *General Penitentiary.* 1843. During this period the average number of prisoners on any given day was 616 (excluding military prisoners).

medical men and encouraged medical and sanitation research in the new prison environment. However, most efforts were fairly ineffectual. In response to the apparent failings of the government to make the new convict institutions healthy and sanitary, a new rhetoric about criminals began to emerge. Some suggested that criminals were diseased within themselves; consequently, it was not the prisons' fault if criminals got ill. As we will see through this thesis, this language of innate failings within criminals developed throughout the nineteenth century.

III. William Baly and the Role of the Prison Medical Officer

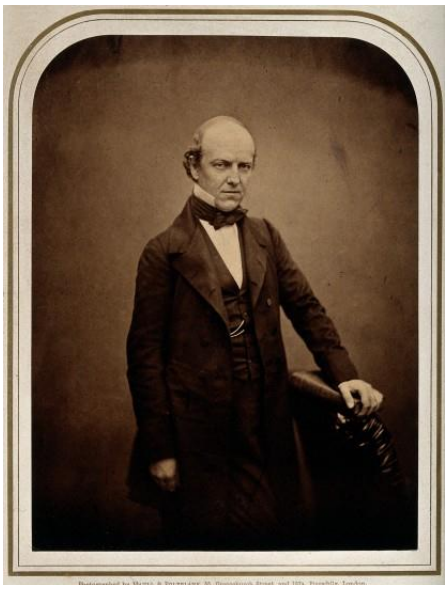

Figure 1.3 William Baly

Date unknown. Photograph by Maull and Polyblank. Wellcome Library, London no.12300i.

As the previous section highlighted, Millbank's design and structure meant it was inadequate for healthy habitation. This meant that those PMOs tasked with maintaining the prison population's health encountered chronic issues, not aided by harshly punitive regimes enforced by various prison governors. This section examines the career of William Baly (1813–61) (Figure 1.3), who was significant both for being an early PMO at Millbank, but also through his subsequent influence in the fashioning of the role of PMOs at all prison institutions. Not only was he tasked with tackling disease at Millbank, he extended the scope of his role by reporting on cholera in Britain. His work on disease will be explored in more detail in section IV. Baly is the only famous PMO to appear in

this thesis.[235] He was involved in Millbank's medical provisions through his role as a visiting doctor then as superintending medical officer from 1839 to 1859, before acting as Queen Victoria's Physician Extraordinaire for the last two years of his life.[236] Baly specialised in physiology and gastric disease, becoming a renowned expert in dysentery and cholera as a direct result of his work in Millbank and association with the Royal College of Physicians (RCP). This section argues Baly successes and career shaped the role of PMO in the 1840s in English convict prisons.

Baly was brought up in Norfolk where he attended the local Grammar school and was apprenticed to a local General Practitioner. In 1831, he began his medical studies at University College London (UCL), and in 1832 he began his pupillage at St Bartholomew's Hospital. In 1834 he passed the examinations of the RCS and Apothecaries' Hall. He spent two years abroad studying in Paris, Heidelberg, and Berlin. He graduated MD in Berlin in 1836.[237] When he returned to England he began general practice in London. He was also for a short time medical officer to the St Pancras Workhouse.[238] In 1841 he became Millbank's permanent medical superintendent following the dysentery outbreak described in section II. He had rooms on site, but his home was in Regents Park.[239]

Between 1837 and 1842 Baly translated the eminent German physiologist Johannes Müller's *Handbuch der Physiologie des Menschen* (titled *Elements of Physiology* by Baly). Baly's work was not only a translation but also a commentary on the text. He independently tested the contents, added new knowledge, and commissioned woodcuts.[240] This book was very well received and was widely referenced. His independent work included "On Mortality in Prisons", in *Medico-Chirurgical Transactions* (1845), and he presented on dysentery at the RCP's *Goulstonian Lectures* (1847).[241] In 1846 he became a Fellow of the RCP and in 1847 a Fellow of the Royal Society.[242] Baly acted as censor of the RCP (1858–59) and sat as a crown representative on the General Medical Council. He lectured in forensic medicine at St Bartholomew's Hospital from 1841, then in 1854

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[235] The RCP instituted a gold medal awarded biennially in his name for distinction in physiology. RCP.MS-BALYW/715/386.
[236] A post held by Latham before him.
[237] RCP.MS-BALYW/716/37. 1836; *RCP*.MS-BALYW/715/345. *Travel Diaries from 1834–1836.*
[238] RCP.MS-BALYW/716/60. *Letter of Confirmation.* 6 January 1838.
[239] Census 1841.
[240] Bracegirdle 1996: 119.
[241] See *ODNB* 'Baly, William' and bibliography for an extended list of published works.
[242] Baly became member of the RCP after 6 exams, 3 written 3 oral *RCP*.MS-BALYW715/280.

he became assistant physician there, and in 1855 began lecturing on medical courses at postgraduate level.[243] Early in his career he began corresponding with well-placed political and medical men.

Given that Baly had an extensive research and teaching career, and could have expected to open a private practice or take on a hospital role like most of his contemporaries, why did Baly choose to work in Millbank? The turning point of Baly's career was the recommendation to go to Millbank and observe and report on epidemic dysentery by his teacher and colleague, Peter Latham. Having found the experience of visiting Millbank useful himself, Latham suggested that Baly would benefit from a similar experience.[244] Baly was an inquisitive researcher and observer, as demonstrated by the physiological study he was carrying out for his Müller translation and despite having no particular expertise or interest in sanitation or dysentery at this time he went to Millbank. In 1840 Baly was appointed to visit and report on health at Millbank prison following a series of epidemics. He was appointed by the prison inspectors and Secretary of State to work alongside the resident surgeon for twelve months to provide "vigilant supervision of the condition of prisoners in respect to health."[245] Baly began his attendance on 12 February 1840 and "devoted himself […] to the investigation of every point connected with the health and medical statistics of the Institution".[246]

Baly's obituary claimed that much of what he did at Millbank he did in order to earn a living.[247] But his personality meant he did everything with "scrupulous care" and with the intention of "honestly displaying the power with which he was prepared to enter on the contest of his life."[248] The obituary went on to say that the post at Millbank was advantageous to him for a number of reasons: a means of living when his private practice was short of patients, a large number of sick to care for, diseases of particular interest to contend with, and finally his coming into contact with government officers who trusted and appreciated him.[249] Baly could not have known that the role would give him contacts in government making him "a principal medical adviser of government on questions of

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[243] See ODNB 'Baly, William'.
[244] Anon 1861a: 151.
[245] Inspectors of Prisons of Great Britain I. Home District, Fifth Report, 1840: 199.
[246] Report of Committee of General Penitentiary at Millbank, 1840.
[247] Which is plausible, as he often was obliged to write to his father to request money, particularly to pay for subscriptions to journals or societies or for rent. Baly worked hard to stay abreast of medical training but also to maintain a good appearance personally and in his address. (*RCP Letters*).
[248] Anon 1861c: 147; Anon 1861a: 150.
[249] Anon 1861c: 148; Anon 1861a: 151.

hygiene in prisons."[250] But the previous three reasons, combined with the influence of Latham, might have been enough to persuade Baly that Millbank is where he wanted to use his medical training.

In Millbank Baly became something of a 'prototype' for subsequent PMOs. This was not because he was in the first prison. Even if that had been the case, he was not Millbank's first PMO. The superintendent medical officer at Millbank was the "*de facto* senior prison officer" I argue because of Baly.[251] By 1842, when Baly was establishing himself, Millbank was no longer the "national penitentiary" having been replaced by the "model prison", Pentonville. Other government-run prisons, such as Wakefield, Woking and Parkhurst, were also operational. Nevertheless, thanks to Baly, Millbank, rather than one of the new prisons came to be seen as the pinnacle of a PMO's career, usually leading to a position as a prison inspector, government advisor, or in a few cases like Baly a royal physician. Baly made Millbank so important (despite its constant failures) by laying the ground work there of what a prison medical officer could do.

A formal position of Chief Medical Superintendent" would not be introduced until 1878.[252] Until then Millbank remained central to prison medicine. Baly was able to make the role centrally important to prison management in five significant ways. First, Baly created strong government links. He was extremely well connected and corresponded regularly with officials and the HO, and spoke directly to Parliament on issues relating to prison policy and epidemic disease more widely. He was also involved in investigations concerning local prisons, hulks, and the sanitary provisions of Gibraltar.[253] Perhaps most importantly Baly corresponded with and worked alongside Joshua Jebb who, as discussed, designed much of the modern prison system. It was Jebb who set Britain on the path for a government-controlled prison system. Jebb actively encouraged other PMOs and prison inspectors to consult Baly, and personally circulated Baly's reports and articles thus lending support to Baly's work.[254]

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[250] *Ibid.*

[251] Wiener 1995: 51.

[252] McConville 1981: 452.

[253] Report by Doctor Baly to Secretary of State for Colonies on Quarantine at Gibraltar 1855; Report of Doctor Baly on Sanitary State of Gibraltar 1854–55.

[254] "He was brought into contact with government officers: many of whom could appreciate his trustworthiness and rare ability" and "He constantly cultivated and adorned his mind; and he made and retained friends in every rank of life-literally: from the prison to the palace." Anon 1861c. 149–150. He was "…always trusted and very generally referred to: as a principal medical adviser of government: on questions of the hygiene of prisons." Anon 1861c: 147–8.

Secondly, Baly was relatively atypical in being in a position to do research, which made his work of ready interest to a general medical audience. The fact that his case studies were in prisons was irrelevant for general medicine. Generally, doctors were relatively isolated in practice. They might subscribe to journals like the *Lancet* or the *BMJ* and maintain some personal correspondence and connections. Some "had the inclination and time to follow developments in knowledge and even communicate their own ideas to fellow practitioners, but very few had the opportunities to make their own investigations."[255] The work Baly did on dysentery and cholera was very important to the nation's health, as was his 1843 work that showed potatoes could prevent scurvy because of their antiscorbutic qualities.[256] This knowledge was utilised in prisons and workhouses. His work on cholera and dysentery made it acceptable to see convicts as a research topic and source of data.[257] Baly does not seem to have shared concerns about malingering, probably because he mostly had to deal with bowel disease, which is difficult to fake in the controlled prison environment.

Thirdly, Baly's involvement in teaching came to characterise PMO practice. Baly taught alongside practising as a physician and surgeon, as well as undertaking post-mortems and microscopic research. Baly's teaching practice helped to integrate him with other doctors and students and kept him part of the medical community, as well as spreading his own ideas and research. Through such exposure to Baly's alternative career path students were introduced to the possibility of going into government service rather than private practice. The first course Baly taught at St Bartholomew's was Forensic Medicine, which was developing as a subject. It is notable that a prison doctor, rather than someone specialising in the new field of forensics, taught this course.

The annual Medical School Calendar (which outlined the course of studies) for the 1841-42 session contained the following entry: "*Forensic Medicine by William Baly, M.D. Physician to the General Penitentiary"*. Baly assured his students "*The object of these Lectures is to teach the application of Medical Science to the elucidation of questions occurring in Courts of Law and to afford rules for the conduct of the Medical Practitioner, when engaged in Medico-legal Inquiries, or under examination in a Public Court of*

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[255] Worboys 2000: 21.

[256] Baly 1843; Anon 1935: 431.

[257] Baly did not go as far as some later PMOs who used forced electrotherapy or shock therapy with cold water to treat ailments and detect malingering, particularly in 1850s and 1860s. See Campbell 1884; Ticket-of-leave-man 1879; One-who-has-endured-it 1877.

Justice."[258] Note that the course very much focused on court proceedings, which were becoming an important part of the role of physician along with the rise of the "expert witness."[259] Baly was called to court to testify on the bodily and mental health of some convicts. The course was divided into three parts. The first comprised of "*the consideration of all questions concerning the social relations and qualifications of individuals, which may become the subject of medico-legal investigation*." The notes from the course have sadly been lost, and it is unclear if the course focused on the criminals as the subject of investigation or the victims. The second "*discussed all questions relating to the injury or death of individuals, whether arising from poison, intentional violence, accident, or other sudden cause."* The third part "*embrace[d] the subjects of Medical Evidence, the Laws relating to the Medical Profession, public health, and the Quarantine regulations.*[260] This is perhaps where Baly' prison experience was most relevant. It is likely that he used case studies from Millbank in this part of the course.

The course description stayed much the same for the next couple of years, but the 1844–45 sessions handbook showed the course had developed. The course was now "*Forensic Medicine by William Baly, M.D. Physician to Millbank Prison*," rather than the General Penitentiary. Now causes of injury and death made up the first part of the course, followed by "*all questions concerning the Social Relations and Qualifications of Individuals, which may become the subject of Medico-Legal Investigation."* This might have included who "the criminal" was, how they became a criminal, and some psychological assessments. The third part of the course looked at "*Medical Evidence, the Laws relating to the Medical Profession, and Public Health."*[261] Quarantine was no longer included, although debates on solitary confinement were still very much alive. Although public health was being taught, hygiene did not appear on the medical curriculum until 1864.[262] The course was very much aimed at medicine in courts of law. Further details of the syllabus were outlined including understanding death by asphyxia, poisoning or climate. It also taught identification of victims by age, sex and other characteristics, and covered marriage, death, and the law relating to children, property and inheritance, making it a very all-encompassing legal course for medical students.[263] Baly's credentials as a scientific

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[258] *St Bartholomew's* SBHMS/A/14. *Medical School Calendar*. 1840–41.
[259] See Smith 1981b; Burney 2000; Golan 2004; Cunningham 2010.
[260] *St Bartholomew's Hospital Museum* SBHMS/A/14, *Medical School Calendar.* 1835–1975. Note, one course would have cost a medical student three Guineas, Unlimited was four Guineas.
[261] *St Bartholomew's* SBHMS/A/14. *Medical School Calendar*. 1840–41.
[262] Smith 1987: 191.
[263] *St Bartholomew's* SBHMS/A/14. *Medical School Calendar*. 1844–5.

researcher were hinted at through the course adverts which stated "the Lectures will be illustrated by Diagrams, Tables and Preparations, and also by Experiments and the use of the Microscope."[264] He believed in using and teaching the power of observation, telling his students "Before you can have the right notions of the general truths of any medical science, you must gain a precise knowledge of its particular facts; and you can do this only by close and accurate, and repeated observation."[265] Despite his other commitments Baly managed to research and write about disease and prison medicine during his career at Millbank.

Fourthly, Baly was an active member of the societies to which he had been elected, which aided his career in various ways. In particular, Baly's connection in the RCP gave him access to research projects—like the cholera report. Again, this involvement kept him in touch with the medical community, and in turn indicated to general practitioners that PMOs could be a valuable asset to medicine. Baly and his colleagues were not on the medical fringe or side-lined for being civil servants within these societies. Fundamentally, it was recognised that civic institutions like the prisons were not alternative spaces for medicine and medical employees were not, regardless of what Baly's obituary claimed, side-lined practitioners just seeking money.[266] After Baly, the position of PMO became a viable career option and not one that took the practitioner away from the medical community.

The final way in which Baly made Millbank and PMOs central to the government prison system and medicine was through his publications which gave him prestige, proved his credentials and provided further scope for correspondence, cementing Baly's reputation and giving the medical community some insight into prison matters. Baly's translation of Müller's *Elements of Physiology* proved more than his doctorate had to the British establishment that Baly was a notable scholar. Similarly, Baly's work on cholera with William Gull (section IV) was used regularly by physicians and policy makers until cholera left Britain in the 1860s. Baly made his readers see prison medicine as part of general medicine.

William Baly had "fulfilled his function admirably, and had made Millbank the focus of his career after his appointment in 1841 at the age of 27. In this respect, Baly fitted snugly into the model of the convict prison medical officer-ship as it developed after 1850" wrote

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[264] *St Bartholomew's* SBHMS/A/14. *Medical School Calendar*. 1844–5.
[265] Baly 1848: 19.
[266] Anon 1861a.

Anne Hardy.[267] Baly was more than this. He made the profession reputable, he set to work integrating what he did with the wider medical community, and he made prison medical officers indispensable to the government. After 1842, and through correspondence with Jebb, it became mandatory that PMOs views were included in annual reports and presented to prison inspectors and the magistrates. The juggling of different roles in the research community became common for subsequent PMOs, and this was a direct consequence of Baly's work. Had he not done this so successfully, the taking on of other roles by PMOs could have become restricted in the prisons as they became more systematised.

Baly died on 28 January 1861, when the train he was on from Waterloo to Portsmouth derailed on a bridge. Baly died in the crash and several other people were injured. His death was widely reported in national and local newspapers and in most medical publications.[268] The *Medical Times and Gazette* wrote of Baly that "the real business of his life was practical medicine."[269] This was something the journals considered praiseworthy, seeing Baly as an example of what a physician (not just a PMO) could be. The slightly gushing obituary pointed out that "he started in the crowd with neither wealth nor costly education…no brilliant genius, no lucky gift of cleverness" but had "efficiency of intellectual and moral excellence" for success to "literally go from the Prison to the Palace."[270] The prison was not described, but the tone invited the reader to consider the class and number of people Baly dealt with, and therefore how strong his character must have been. His contemporaries and obituary writers saw him as a medical man rather than a PMO. There is an implicit assumption that the characterisation of Baly as a medical man rather than a prison medical man prioritising being a doctor over being a civil servant. Baly's obituaries focused on his medical work, either minimising his prison work or, I believe suggesting his role in the prison was just another medical role. His lack of inclusion in nineteenth-century medical history is perhaps a reflection of later values placed on medical men inside state institutions which in Baly's case, favour emphasis on government and royal connections. In part the lack of existing narratives about prestigious prison medical men goes some way to explain why PMOs have been left out of medical histories.

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[267] Hardy 1995: 62.
[268] *Birmingham Daily Post*, *Liverpool Mercury, Glasgow Herald* etc. 31 January 1861.
[269] Anon 1861c: 148.
[270] *Ibid*: 148.

IV. Epidemic Disease and Scientific Research

In this chapter we have looked at how Milbank was designed and the problems that caused for health. Millbank was central to the PMS, and Baly's career in Millbank shaped what the role of PMO could be. This section brings together the problems at Millbank and Baly's career in order to examine medico-scientific research in prisons, using cholera as an example. This will emphasise the value of the prison as a site for medical research, but also the way in which Baly created the conditions that were advantageous for his work. The section also highlights some of the difficulties with defining, understanding and treating disease in early to mid-nineteenth century Britain. Baly was part of a wide community of doctors and public health professionals trying to understand and control epidemic diseases.

In 1831–32 an estimated 31,474 people died from cholera in England, Scotland and Wales.[271] There were an estimated 53,000 deaths in England from cholera 1848-9.[272] The statistics are not reliable: records might not have survived and diagnosis was difficult.[273] Millbank proved to be similar to other urban spaces in its propensity for disease. What was different was that the people, their clothes, food and routine, as well as sanitation and cleanliness could be better controlled. Significantly, diseases in the prison did not always match the surrounding areas on London, mostly because of the measures put into place by PMOs. Not only was it possible to examine disease when outbreaks took place then, it was also possible to properly examine the effects the PMOs prevention measures had.

Cholera was one of the most unexpected and devastating epidemic diseases to reach the British Isles. It caused fear and panic as it spread swiftly, and often resulted in a rapid death (under 24 hours). Once individuals had died their bodies decomposed quicker than usual. Those who did survive were left with a bluish-tint to the skin because of dramatic dehydration.[274] The first cholera outbreak was in Sunderland in 1831, and the disease continued to reappear around the country, particularly in ports. The disease was identified as "Asiatic Cholera" which had come over from India (via Ireland), and was quickly known as a "disease of society" being significantly more problematic in urban areas.[275]

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[271] Watt 1999: 195.

[272] McLean 2006: 3.

[273] For examples, until 1855 scarlet fever and diphtheria were often confused, and typhus and typhoid were not clearly defined until 1869. Similarly, tuberculosis could be misconstrued with other respiratory diseases. McKneown and Record 1962: 95.

[274] Bynum 1994. 75; Barnet 2014.

[275] Briggs 1961: 76.

Cholera had another fearful quality: it appeared to be indiscriminate and less class-specific than diseases like typhus, which predominantly affected the working classes.[276] In 1831 the government, and many physicians and traders, believed cholera was not contagious but targeted "predisposed" people who were poor, immoral or succumbed to vice, possibly because of divine chastisement.[277] In 1849, 478 cases of cholera were treated at St Bartholomew's Hospital but none of the nurses caught the disease, further supporting the perceived relationship between morality and disease.[278] It was observed that the infection seemed to act miasmically on residents in particularly unsanitary areas, and there was a strong correlation between places which suffered from typhus fever and from cholera.[279] This link prompted a focus on disease amongst the working classes rather than on sanitary issues in a period before local boards of health existed.[280] Given its associations with immorality, cholera was of particular pertinence to study in prisons. If there was a clear correlation, prisons *should* have been prime spots for epidemic outbreaks, given the immoral and often impoverished nature of its residents. There were many suppositions as to how cholera spread, including it spreading from dead bodies, through the air, poisoned soil, poisoned linen, and alcoholism, for example. It was not clear if it was contagious or not.

Many histories of cholera focus on the 1831–32 epidemic, the first of Britain's cholera outbreaks.[281] But it was in the 1840s that concerted efforts were made to understand and tackle cholera.[282] Early attempts to control the nation's health and sanitation have been attributed to Sir Edwin Chadwick (1821–95) who was heavily involved in the implementation of the Poor Laws in the 1830s and promoted a nationwide system of workhouses.[283] Chadwick advocated state intervention though government boards and commissions which never came to fruition. Bynum has argued that by 1854 the nation had decided it would not be "bullied into health" and thus rejected Chadwick's ideas.[284] Meanwhile, in prisons the convicts had no choice: the PMO's sanitary measures had to be implemented.

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[276] Bynum 1994: 76.
[277] Traders did not want cholera to be contagious as this might mean quarantines were introduced which would reduce trade and maritime travel.
[278] Creighton 1965: 842.
[279] *Ibid*: 842.
[280] Watts 1999: 194.
[281] For example Durey 1979.
[282] Gilbert 2012.
[283] Mandler 2008.
[284] Bynum 1994: 78.

Alongside Chadwick's efforts independent bodies were being set up to tackle public health issues. Partially in response to the growth of disease and concerns of urbanisation, Liverpool in 1847 became the first city to employ a Medical Officer of Health. Other cities soon followed suit.[285] These roles were mostly advisory, overseeing rather than leading but it gradually became acknowledged that there was a need for systematised public health. In 1848 the first Public Health Act, administered by the Board of Health and chaired by Lord Shaftesbury, was passed.[286] This was a response to the observation that the areas with cholera there were usually the same places that had issues with bowel complaints (dysentery and diarrhoea). The Public Health Act sought to bring cholera and industrial disease under control through sanitation improvements. London was of particular concern and cholera was rife, possibly because the River Thames was infected.[287] If the Thames was the cause, Millbank was at particular risk given its location on the banks of the river and reliance on its water until a well was installed in 1854, at the insistence of Baly.

In 1848 a government inquiry began to tackle cholera. The General Board of Health considered instigating an extended investigation, but a "cholera committee" had already been founded by members at the RCP so they carried out the research. The committee included the RCP President, John Ayrton Paris, Sir William Burnett (inventor of Burnett's disinfecting fluid), Thomas Watson, William Guy (see chapter 2), Richard Bright, Thomas Mayo, Benjamin Babington, Peter Latham (formerly of Millbank), George Budd, and ten others.[288] At the second meeting they were joined by William Baly, George Roupell and Southwood Smith. The physiologist, William Withey Gull, joined a few months later.[289] Initially, the committee put together a list of precautions in response to those published by the General Board of Health.

In January 1848, Baly and Gull were appointed as a paid sub-committee to write a report on the current knowledge and experience of cholera in Britain. Circulars were sent to hospital physicians and college members asking for information on treatment practices.[290] Baly was probably appointed due to his expertise on the gut. He was not yet renowned but

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[285] *Ibid*: 77; Power 2011: 11-23.

[286] As Szreter 1988 argues this was not a benevolent action to improve living standards nor did administrative changes alone improve sanitation.

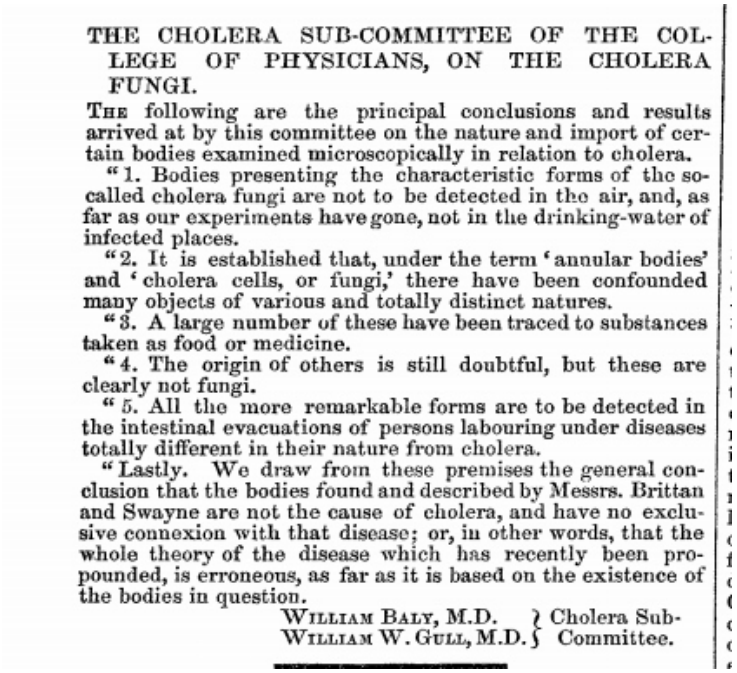
[287] Thomas 2010: 102.

[288] See RCP Lives of the Fellows.

[289] Pelling 1978: 178; William Gull was Professor of Physiology at the Royal Institute and at Guy's hospital. He would later attend Prince Albert when he caught Typhoid Fever; See RPC Lives of the Fellows.

[290] Pelling 1978: 179.

was experienced in clinical microscopy.[291] In September 1848 they sent another circular asking for information on post-mortems, blood analysis and similar information. This had a weak response from college members, so the circular was sent further afield. On 17 October 1849 Baly and Gull presented their "Report on the Nature and Import of Certain Microscopic Bodies found in the Intestinal Discharges of Cholera." The Report was then sent out to members of the RCP ten days later. Unlike German laboratory-based chemist Justus Liebig, the continental expert on cholera, Baly and Gull did not see cholera as a condition of internal transformations, and therefore a physiological problem. They believed that external influences were the primary causes of disease. Baly had seen similarities between cholera and dysentery and concluded that if one was caused by a fungus then the other probably was too.[292] They outlined some of their core conclusions in 1849 in the *Lancet* (Figure 1.4).



THE CHOLERA SUB-COMMITTEE OF THE COLLEGE OF PHYSICIANS, ON THE CHOLERA FUNGI.

THE following are the principal conclusions and results arrived at by this committee on the nature and import of certain bodies examined microscopically in relation to cholera.

"1. Bodies presenting the characteristic forms of the so-called cholera fungi are not to be detected in the air, and, as far as our experiments have gone, not in the drinking-water of infected places.

"2. It is established that, under the term 'annular bodies' and 'cholera cells, or fungi,' there have been confounded many objects of various and totally distinct natures.

"3. A large number of these have been traced to substances taken as food or medicine.

"4. The origin of others is still doubtful, but these are clearly not fungi.

"5. All the more remarkable forms are to be detected in the intestinal evacuations of persons labouring under diseases totally different in their nature from cholera.

"Lastly. We draw from these premises the general conclusion that the bodies found and described by Messrs. Brittan and Swayne are not the cause of cholera, and have no exclusive connexion with that disease; or, in other words, that the whole theory of the disease which has recently been propounded, is erroneous, as far as it is based on the existence of the bodies in question.

WILLIAM BALY, M.D. } Cholera Sub-
WILLIAM W. GULL, M.D. } Committee.

Figure 1.4 Cholera Sub-Committee findings as reported in the Lancet

Baly and Gull 1849c: 493.

Whilst working for the Committee, Baly was still at Millbank. In January 1849 the HO, directed by George Grey, wrote to Millbank enquiring into the health of those affected

[291] *Ibid*: 181.
[292] See Baly 1849: 580–583.

with cholera and asking if the treatment provided in the prison allowed them to "state any facts" about cholera and if there was anything "useful to communicate" to the visiting justices.[293] They received a reply from William Williams and John Perry, Millbank's inspectors. Their response was vague and they referred the HO to Baly. Baly wrote a cholera report to be passed to the justices and to accompany the letter from the inspectors. The inspectors considered the report was comprehensive and had "practical character."[294] They recommended to the HO that Baly's report be circulated through the prisons of Britain.[295] Reinforcing that Millbank's PMOs were to be consulted on almost all medical issues relating to prisons, a practice that had begun with Baly's writings on dysentery at the beginning of the 1840s.

After Baly's 1848 prison cholera report was circulated, letters between the General Board of Health and the HO reveal that plans were written up and carried out to clean the sewers around Millbank to protect local populations and inmates. The area around the sewers was no longer to be used as a garden, in order to reduce potential contamination.[296] These measures preceded public health policy in London which did not develop its modern sewage system until 1859.[297] The plan to improve London's sewage problems was suggested by Robert Booth in 1854 and had been influenced by Millbank's attempts to improve sewerage.[298] Booth claimed that through "a series of experiments" he procured the knowledge to "remove filth" without affecting health and with "small expenditure".[299] He had learnt from the prison experiments' failures. In his opinion the sewerage system at Millbank was "decidedly bad and injudicious". He did believe, however, that urban areas were not unlike the prison, knowledge gained in prisons could be useful.[300] In addition to improving sewerage in 1848, the HO appointed new chaplains and school masters.[301] This was in part due to the size of the population, but also formed part of a reform programme and of an attempt to improve prison health through education and religion. After all, the virtuous were less prone to disease.

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[293] TNA.HO45/2953. *Correspondence Regarding Millbank …* 16 January 1849.
[294] TNA.HO45/2953. *Correspondence Regarding Millbank …* 29 January 1849.
[295] TNA.HO45/2953. *Correspondence Regarding Millbank …* 29 January 1849.
[296] TNA.HO45/2953. *Correspondence Regarding Millbank ….* 16 January 1849.
[297] Bazelgette 1865: 9.
[298] TNA.HO45/5309. *Sanitation: Prisons and Prisoners. Letters and Notes from Robert Booth… 12–22 September 1854.*
[299] TNA.HO45/5309. *Sanitation: Prisons and Prisoners…12–22 September 1854.*
[300] TNA.HO45/5309. *Sanitation: Prisons and Prisoners… 12–22 September 1854.*
[301] Meaning there were three chaplains and ten school masters. TNA.HO45/2953. *Correspondence Regarding Millbank ….* Chaplains were paid £200 a year and teachers £240 as ordered by Jebb.

Baly reported in 1849 that his treatment methods lessened the effects of the disease and many had recovered. He recommended cold-water baths and hot-water bottles in bed. Hot-water bottles were difficult to issue in normal, narrow prison beds so special beds with bedheads were made for cholera patients, and this worked well—he suggested them for other prisons and "similar establishments."[302] Diet at Millbank was in Baly's view sufficient, especially when supplemented with malt liquor, but he felt other prisons and gaols should increase or improve their dietary provisions.[303] He warned "attention to the dryness, warmth and ventilation of the wards and cells and the sufficiency of the prison clothing, is, also, …, in many prisons more needed that it has ever been at Millbank."[304] Additions to clothing including entire flannel undergarments, made a difference, according to Baly.[305] So did the daily "half pint of good porter" each prisoner received along with flannel underwear.[306] He also found larger spaces and cholera wards separate from the main hospital were helpful. He argued that all prisons should have suitable provisions, "not from fear of the disease proving contagious, but to prevent the confusion, inconvenience and alarm that might result from the cholera patients being healed in the same room with those suffering from other diseases." Baly was unconvinced that cholera was transmissible person to person, but did take the distress of the healthy into account when organising the hospital. He was more concerned about prisons being dry, warm and well ventilated to preserve health.[307]

Like his contemporaries, Baly noted that patients with bowel or stomach problems were prone to cholera. Consequently, he argued, prevention was more important than treatment in the case of cholera—he placed "great value" on "general sanitary measures."[308] In particular, he advocated drainage and sewage provisions and removal of stagnant water

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[302] TNA.HO45/2953. *Correspondence Regarding Millbank ....* January 1849.

[303] TNA.HO45/2953. *Correspondence Regarding Millbank January 1849–May 1849;* Szreter 1988 argues historians have put too much emphasis on the success of dietary changes in relation to public health. For Baly, however, it was important. Even if Szreter is correct and the relationship between nutrition and declining mortality rates in the nineteenth century has been over emphasised by historians.

[304] TNA.HO45/2953. *Correspondence Regarding Millbank January 1849–May 1849.*

[305] See Dobash et al 1986; Ash 2011; Richmond 2013; Bloy 2016 and a forthcoming article by Sellers on Brixton female prison. It is also notable that PMO's saw clothes as playing an important role in health, In 1838, five days after the opening of Parkhurst Prison, Benjamin Browning the PMO there informed Parkhurst's governor that the flannels issued to juvenile prisoners were causing "rheumatic pains" and "weakening of the loins" because the boys were not used to the material. He recommended that flannel waistcoats (like banyans issued to the Navy) should be distributed. Manser 2000: 37.

[306] TNA.HO45/2953. *Correspondence Regarding Millbank...* 20 January 1849.

[307] TNA.HO45/2953. *Correspondence Regarding Millbank...* 20 January 1849.

[308] TNA.HO45/2953. *Correspondence Regarding Millbank...* 20 January 1849.

and decaying animal or vegetable matter. He wrote: "prisoners, owing to the circumstances, moral and physical, of their conditions" were "far more prone to suffer from general causes of disease than persons at liberty".[309] Also "the most frequently prevalent diseases of many prisons being, in fact, produced by the miasms arising from damp ground and from collections of decaying matters, which are insufficient to cause any perceptible disturbances of health in the free population around."[310] In his report Baly suggested that the proximity to nearby foul-smelling factories and sewers and damp, foetid atmosphere from the very polluted River Thames were the main causes of cholera, again noting the locational and design problems of the building. He had also begun to consider whether the custom in the prison, and of other nearby institutions having a high incidence of cholera, of drawing drinking water from the Thames was also implicated. Although he was not sure of this, he pressed for an "artesian well" to supply the prison and in 1854 this was dug near Trafalgar Square and a direct supply was piped to the prison.[311] Cholera all but disappeared from the institution. Baly, none the less, believed contaminated water to be no more than a subsidiary, "exciting" cause of the disease.[312]

Baly attributed the low number of mortalities of cholera at Millbank to its good management, but instances of the disease from "time to time" meant that the site had to be viewed as "favourable to its development of a serious epidemic."[313] Thanks to Baly's measures no prisoner had contracted cholera since before Christmas the previous year, with the exception of five cases in the previous six weeks, all of which involved prisoners who had been recently admitted and had probably contracted the disease elsewhere, according to Baly.[314] This work fed into the initial 1849 report for the RCP and then later into the full version of *the Report* which was not published until 1854. It was a comprehensive document containing all reported knowledge of cholera, and assessment of the different potential causes and preventative techniques. This document is well over three hundred pages and is mostly descriptive. It is not completely clear who contributed what, but it seems likely that Baly mostly reported on the cause and prevention of cholera as well as microscopy, whilst Gull wrote about its morbid anatomy, pathology, and treatment.[315]

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[309] TNA.HO45/2953. *Correspondence Regarding Millbank...* 20 January 1849.
[310] TNA.HO45/2953. *Correspondence Regarding Millbank...* 20 January 1849.
[311] RDCP for 1855: 76–7.
[312] Baly in Baly and Gull 1854: 195–207.
[313] TNA.HO45/2953. *Correspondence Regarding Millbank…* Baly's Report, Spring 1849.
[314] TNA.HO45/2953. *Correspondence Regarding Millbank…* Baly's Report, Spring 1849.
[315] Pelling 1978: 181.

Collectively they examined six possible causes for cholera's spread;

1. General state of atmosphere—this they rejected, as they saw no links between weather and the disease.[316]
2. Cholera was caused by a local material substance—they deemed this possible, as cholera seemed to occur where sanitation was poor, and the possible spores could move on other materials.[317]
3. Human interactions spread the disease—this was rejected, as people travelled too much and interacted too frequently to correlate to the disease, which was less well travelled.[318]
4. It was a contagion which travelled on clothes, walls and so on, until conditions were found favourable—Baly and Gull thought this possibly explained why cholera occurred in certain areas, but struggled to explain why *everyone* in a particular area did not catch it.[319]
5. Cholera moved through food—they found no evidence to support this.[320]
6. Cholera travelled through water—Baly and Gull thought there was not enough evidence for this, but they did see a link between poor areas and poor water.[321]

Baly and Gull believed cholera, whether chemical or organic, was diffused through damp or impure air, and by human interaction.[322] It also seemed it was mostly likely to affect those who were already unhealthy or lived in poverty. Sanitary research in the 1830s and 1840s was based on superficial observation; little progress was made in discovering the aetiology of diseases. Baly and Gull were novel in suggesting that disease might be caused by something microscopic and external, acting on the body.[323] Very few dealt with "internal" diseases; those that did were at the top of the "professional pyramid", argues Worboys.[324]

Alongside their own work, Baly and Gull received a myriad of responses to their questionnaire. Most medical men were informed by environmental observations only, and

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316 Baly and Gull 1854: 4, 5, 25-26, 32-44, 99, 214-215, 250-254.
317 *Ibid*: 4, 106-110, 162-190, 216-218.
318 *Ibid*: 218-210.
319 *Ibid*: 2, 5, 106-110, 162-190, 198, 220-222.
320 *Ibid*: 198, 222-223.
321 *Ibid*: 5, 198-214. 222-223.
322 *Ibid*: 5, 223.
323 See the Lancet and BMJ for examples of contemporary literature, most believe cholera spontaneously emerged through pythogenesis or was spread by miasmas.
324 Worboys 2000: 21.

thus sided with either miasmic or water-born theories of cholera transmission, or both. Today, the most famous cholera breakthrough story involves John Snow, who in 1854 was able to trace the source of the outbreak to a water pump in Broad Street, London, by reverse plotting the distribution of cholera in the city.[325] Snow examined water microscopically and chemically but could not identify a causative agent, although he believed a living or chemical cause resided and procreated in the water and in the chain of infection.[326] Snow was preceded by Robert Baker, who used statistics and observation to map the spread of cholera in Leeds in 1831-33. Baker did not, however, show that the disease was water born although he linked it to poor sanitation, sump holes and human waste. He concluded that miasmata allowed cholera to spread in the city.[327] The story of John Snow and his discovery of the water-born transmission of cholera, is one of very few stories included in modern epidemiological text books.[328] This is mostly because it is a demonstration of "the epidemiological imagination" in action.[329] But this was just one of many epidemiological and associated statistical studies happening in the period. Snow's theory was not immediately accepted, it has been argued because of Snow's social status. He did not attend a public school and obtained his medical degree from UCL, a "Godless" institution.[330] Baly had also studied at UCL so this cannot be the sole reason. It is more likely that he was contradicting entrenched views, without sufficient evidence. Other studies of water samples included those by John Marshal at University College Hospital, Sir William Jenner (1815–98) and J.W. Griffith.[331] Snow's theory was one of several theories which might help control cholera, rather than *the* explanation. Snow shared his results with Baly and Gull, but they were not totally convinced.[332] They thought cholera had a range of causes and that Snow did not have enough evidence to be sure of his explanation, and that, although it helped control later outbreaks, it did not identify the fundamental cause of the disease.[333]

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[325] Briggs 1961; Pelling 1978; Durey 1979; Hardy 1993a, 1993b; Porter 1997; Hempel 2007; Holland *et al.* 2009; Gilbert 2012.

[326] Snow 1854: 32. Snows research, although not universally accepted was used to promote clear water, boiling water before use, introducing filters and banning of sewage infested water by water companies. The biggest objection to his proposals was the expense of water filtering plants.

[327] Brooke 2009: 49–51; Thoresby Society.

[328] Davey Smith 2002: 920.

[329] *Ibid*: 920.

[330] Watts 1999: 169.

[331] Pelling 1978: 183.

[332] Baly and Gull 1854: 208.

[333] Warren 2009: ii.

Miasma theory was the most popular explanation in the questionnaire responses, and this theory influenced Parliament's passing of the "Bill for more Speedy Removal of Nuisances, and to enable Privy Council to make Regulations for Prevention of Contagious and Epidemic Diseases" in 1846, which was quickly dubbed "The Cholera Bill".[334] This Act was used during the cholera epidemic of 1848-9 to encourage property owners to clean their dwellings and connect them to sewers. Others, such as William Farr, suggested that wind direction affected the spread of cholera. Baly and Gull rejected this but did believe miasma had something to do with the spread of cholera. Unsure of the causes of disease in 1849, Baly recommended the discontinuation of the mark system, which rewarded convicts with points for good behaviour, and that cell doors be left open during the day for ventilation at Millbank.[335] This was not only recommended as a measure in epidemics. Baly recommended that the separate system should be relaxed in order to preserve mental and physical health. He felt that the degradation and loneliness of being a prisoner—and being seen as such—outweighed the benefits to the system of the anonymity of the masks, and would improve health and "mental energies" and that proper ventilation would improve bodily health.[336]

The final most prominent line of study for Baly and Gull was fungi, something Baly had encountered in his work on dysentery. Baly used techniques he had learnt from dysentery epidemics. In particular, he had the material to study "characteristic mucus" under a microscope, which interested him greatly.[337] The use of the microscope was, for Baly, the height of modernity in medicine. He took great pains in his published work to highlight the use of the microscope and to identify the kind of microscope he was using for any given task. Baly sought a multi-dimensional analysis of disease. In particular, he tried to find the causes of specific disease, medically and environmentally. Using predominantly stool samples and post-mortem examinations Baly had been able to identify specific bodies which are linked to dysentery: he believed they were a type of "fungi".[338] By looking at morbid pathology, Baly was the first to observe that "marks in the large intestines were produced by mortification and sloughing, not just by ulceration."[339] Furthermore, dysenteric sloughs in the large intestines were associated with the true ulcers

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[334] Often known as the "The Nuisances Removal and Diseases Prevention Act".
[335] The mark system is discussed in detail in chapter 2, section III.
[336] TNA.HO45/2953. *Correspondence Regarding Millbank...* 19 April 1849.
[337] Baly 1849: 580.
[338] *Ibid*: 583.
[339] Baly 1847: 5.

of enteric fever in the small intestines. In other words, the large intestines were being stripped of their internal layer, rather than just developing ulcers, and this was linked to extreme ulcers in the small intestines which could cause dehydration, internal bleeding and ultimately death.

Following Baly's reports on dysentery in 1843, efforts to improve sanitation at the prison continued throughout the 1840s. Having been successful in finding the causes of dysentery Baly hoped to do the same for cholera. Like Baly, Frederick Brittan, Joseph Swayne and William Budd believed that cholera was caused by a fungus or spores. It remained unproven however. Seven international sanitation conferences held between 1851 and 1892, were unable to definitively identify the cause of cholera.[340] In 1884, Prussian bacteriologist Robert Koch completed his research into the bacterial causes of cholera (the comma bacillus) confirming the importance of water in cholera's spread.[341]

Historian Michelle Higgs implies that infectious diseases were rampant in prisons throughout the period and that it was not until the 1880s and the actions of prison inspector, Robert Gover, that this problem was addressed.[342] We have seen in chapter 1 that substantial attempts were made long before Gover to improve health. Nevertheless, there remained no unifying sanitation legislation until 1875 when "An Act for Consolidating and Amending the Acts Relating to Public Health in England" (the Public Health Act) was introduced. This Act the provided basis for all sanitary legislation until the First World War.[343] Convict prisons followed their own rules about sanitation, including white-washing walls, cleaning floors, regular bathing (for the period), and fresh water supplies. Many of these changes were implemented by Baly or by other PMOs who read his work.

V. Conclusion: Baly's Legacies

Millbank Penitentiary constituted England's first attempt to establish a government prison built and managed on (modified) Benthamite lines. It was the first experiment into what modern prisons could or should be. As we have seen, it was not completely successful:

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[340] The conferences did not comment on Snow's work, nor did they recognise Filippo Pacini, an Italian microscopist, who identified a unique microorganism is cholera victims' faecal matter. Bynum 1994: 81.

[341] Watts 1999: 167.

[342] Higgs 2013: 37; Robert Gover was inspector of Prisons from 1878 to 1896 having been a prison surgeon.

[343] Bynum 1994: 83.

sanitation problems, failing architecture and epidemic diseases plagued convicts and management. The difficulties with maintaining health whilst maintaining discipline and not overindulging inmates proved challenging but shaped how the convict prison experiment would develop. As we shall see in the next chapter, a new experiment was soon started at Pentonville Prison to address the difficulties thrown up by Millbank. Millbank continued to trial new penal policies and, as we have seen, Baly continued his research and experimented with new ways to control disease as well as diet and the impact of incarceration on mental health.

On 5 May 1843, the HO terminated Millbank's use as a penitentiary, transforming it into what came to be called "a convict depot", which to some marked it as a failure.[344] New convict prisons were being built and became the new sites for experimentation. Nevertheless, PMO William Baly stayed there after 1843, when Pentonville became the new "model prison". The early years of the prison were focused around improving health standards and Baly was central to that story. His work on cholera, dysentery, and nutrition (which has not been discussed here) impacted on Millbank and all subsequent prisons. His research was read and acknowledged by medical men, health professionals and policy makers across the UK. It was also taught in medical schools to new generations of medical practitioners.

Subsequent PMOs who aspired to become superintendents or prison inspectors took up positions at Millbank. It proved a good step on the career ladder, thanks in part to Baly's heavy involvement with advising prison inspectors and government. As discussed, Baly and Joshua Jebb corresponded heavily. Jebb's position as Chairman of the Directors of Convict Prisons made him hugely influential in government, prison design and management. Again, not all PMOs did this, but the view that PMOs' opinions were as valid, if not more useful than governors', inspectors' and chaplains', was soon cemented. Baly's own reports were circulated amongst those working in prisons, again validating the value of his work. PMOs not only improved sanitation but influenced managerial policy (particularly relating to confinement and punishment) and diet. They were consulted in legal cases and heavily involved in the development of psychiatric care. Annual prison reports quickly began to include the surgeons' report alongside the governors'. Despite Millbank being demoted in 1843 to one of many convict depots, rather than the national model prison, the role of superintendent there remained one of the top jobs in the

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[344] McConville 1981: 168. A convict depot or convict station, was a convict prison were convicts were there for a short period of time before being sent to another prison or transported.

profession for most of the nineteenth century, thanks partly to the prestige brought to it by Baly.

Baly's career helped to define what a PMO could be. PMOs never had their own society or journal, but they had the opportunity to be involved in medical, scientific or statistical research and to advise government. After Baly, most PMOs spent the majority of their careers in the prison service, starting in assistant positions. Baly's success in being both a respected medical practitioner and a civil servant paved the way for future PMOs. It had not been a respectable choice before him, but it became apparent that it was still possible to participate in medical societies and publications connecting the PMOs with the wider medical community and making them medical men, rather than just civil servants, if they chose.

Baly's use of the prison in his work and publications for the RCP also made the prison an acceptable place for medical reports and observations to be produced. Substantial research was done in Millbank and in subsequent prisons after Baly used the prison to trial sanitary measures and as data in his papers. In the other four prisons discussed in this thesis it will be further demonstrated that prisons were places for research and contributed to medical and psychiatric knowledge. Much of Baly's time was spent managing disease but his work meant that others in the 1840s, focused on other elements of prison health as prison medicine became more than just controlling disease. As important as Baly's research was, it would be false to argue that his reports completely revolutionised disease control in English prisons; better sanitation did not always halt the spread of disease, but it helped.[345] Baly's work in the 1840s and 1850s changed the way new prisons were built, and old prisons were renovated. New sewage systems, ventilation and cleaning methods were employed to improve sanitation and hygiene. But prisons and prison medicine needed to do more than control the spread of epidemic diseases. Architecture, punishment, sanitation, diet, labour, and exercise all affected convicts' health as we will see in the next chapter.

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[345] Baly's measures appeared to improve prison health as demonstrated by the convict prisons of London remaining relatively untouched by the Small Pox epidemic of 1871. McConville 1981: 415; RDCP for 1854: 123–4.

Chapter 2.

Clarifying the Rules and Managing Bodies: The "Model Prison" at Pentonville 1842–1865

> *... permit me to express a hope that you will use your powerful influence to obtain such modification of the rules and regulations as may consist with the mental and bodily health of the criminals, rather than crush an experiment which has, I believe, been attempted with the best intentions and for the most humane purposes.*[346]

I. Introduction: Legislation, Management and Health

The above passage was included in a letter to the editor of *The Times* in 1843 after two men died in Pentonville Prison, possibly driven to suicide by the separate system, which kept convicts isolated from each other. The passage highlights some important points about the new prison: rules and regulations had been made, but they could also be modified. An experiment was under way, and this was known outside the prisons, through newspapers reports and publications written by prison staff. The newness of the system meant that experimental treatment of convicts was necessary but the fact that it was reported to be carried out with "the best intentions" indicates that for the most part it was felt that prisons, and probably other social institutions like the asylums and workhouses, were intended for the greater good. The fact that this author asked *The Times* to assert some influence and change the system suggests that there was still visible room for improvement as convicts were sometimes seen as being maltreated by the public who were aware of the harsh conditions in English convict prisons. Crime statistics were also seen to be continually rising, despite the prison staffs' best efforts.[347]

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[346] Anon 1843b: 6.

[347] McDonald 1982 argues that the number of crimes was actually falling but judges, lawyers and social theorists all discussed "rising crime". The language was reflected in almost all publications on the subject.

This chapter focuses on Pentonville Prison in North London. Historians have identified it as a prison for separate confinement but, actually it was *the* experimental test-centre trialling the idea that reform and punishment in prisons could, and should, be implemented through separate confinement. Pentonville was designed and built specifically to assess and develop the separate system as penal policy, which had been started at Millbank (chapter 1). By exploring the changing policies piloted at Pentonville, through Pentonville's records, Joshua Jebb's writings, chaplain John Burt's memoir, Pentonville's rule book, and the work of previous historians, this chapter shows that, although experimental, the separate system became routine for those living and working in convict prisons. Pentonville was the result of attempts to balance medical and scientific research, government policy, Benthamite philosophy, and Christianity. This chapter looks at Pentonville from its opening in 1842 until the mid-1860s when a number of legislative changes relating to criminals and prisons were passed, including the 1863 Garrotter Act, the 1864 Penal Servitude Act, and the 1865 Prisons Act.[348] Alongside these harsher prison laws were legislative moves to ensure social and moral improvement, such as the Contagious Diseases Act (1864), and a rapid increase in workhouses. Although there were of course further adaptations to the convict prisons over subsequent decades this spate of legislation confirmed to authorities how prisons should be managed, the length of confinement, and the type of labour that should be performed. The legislative changes brought in greater degrees of uniformity across the convict service, all tried and tested at Pentonville. The Webbs, writing in the 1920s, saw this as part of a "fetish of uniformity", Radzinowicz, however, saw it as inevitable as the prison authorities believed removing uncertainty and variety in punishment was consistent to manging the individual responsibility of criminals.[349]

Pentonville aimed to improve on the failures in architecture and disease management happening at Millbank by "submitting to actual experiment a new system of prison discipline", known as the separate system.[350] It was intended that there should be more convict and public works prisons, and that local prisons should adopt better penal policies wherever possible, where 'better' came to mean more like Pentonville. The practical

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[348] The Garrotters Act was officially the 'Security from Violence Act' (1863). It authorised up to fifty lashes for those charged with theft with violence. The act was not repealed until 1948. The Penal Servitude Act (1864) introduced harsher punishments and convicts had to prove they were 'good' rather than 'not bad' to be released. The Prisons Act (1865) cemented harsher prison policies. For example, convict men had to spend at least three months on a treadmill.

[349] Webb and Webb 1922: 204; Radzinowicz 1966: 20-28.

[350] Burt 1852: v.

considerations which had to be endlessly monitored at Pentonville included maintaining separation of convicts from each other, balancing nutrition, enforcing hard labour, providing for religious and moral reform, and providing time for education, all whilst punishing but not damaging body and mind. These challenges were all part of the PMO's remit and from the beginning medical concerns informed the design of the prison, the rules that were made and then led the decision-making process in all these aspects of the prison system. No decision could be made without consideration of the medical implications.

By unpacking Pentonville as the "model prison", section II of this chapter asks what the plans were for the experiment and how this test facility in North London was designed and managed. The plans were created by numerous men who contributed to the Pentonville experiment, including the chief PMO for Pentonville in the mid-century, Charles Lawrence Bradley, who took over from George Owen Rees in the late 1840s. Although very involved in the Pentonville experiment, Rees and Bradley did not necessarily lead the research programme in the way that Baly did at Millbank. Pentonville was the centre of the experiment, but its staff were not the only ones involved in the debate. Numerous men from different institutions and disciplines were involved, including William Guy, who took over from Baly at Millbank, Robert Gover who went on to be the Prison Medical Inspector, James Davy Rendle who was the chief PMO at Brixton, (the convict prison for women from 1853), John Burt, Pentonville's assistant chaplain, Joshua Jebb, the Director of Convict Prisons, the men of the Pentonville Commission, the HO, and Edward Smith, a nutritional scientist who experimented in prisons.

Section III explores the separate system and punishment and how the new prison system presented new medical challenges. It considers what it was supposed to achieve, how it was managed day to day, what needed to be done by the PMO to maintain health and how physical punishment could be administered safely. This section argues that the factors that constituted the separate system and hard labour changed in Pentonville's first twenty-five years, not because of changing penal philosophy but because of the implications for the convict body and mind. It became imperative to find a balanced system that was both punitive and healthy, which did not damage convicts, but fulfilled the goals of the penal system before transportation completely ended and met the demand of the courts, which increasingly sentenced criminals to "penal servitude" and "hard labour".

Section IV then focuses on diet, a major topic of discussion for prison authorities. The prison commissioners, visiting justices and managerial staff were concerned about the individual body of each convict. It was problematic if poor diet left prisoners underweight,

unable to work, damaged, or dead, but prison authorities wanted to create uniform, efficient and cost-effective systems. This section explores how burgeoning nutritional science interacted with penal policy to create the 'model' penal diet. By controlling diet and environment, including architecture, the authorities hoped to maintain health to avoid the need for restorative medicine. This section argues that food was fundamental to maintaining health in prisons, with food becoming a reward and punishment, as well as a necessity which needed to be scientifically measured and managed.

Pentonville was the model for all subsequent convict prisons and as Chairman of the Prison Commission, Sir Evelyn Ruggles-Brise, said in 1921 "The history of Pentonville Prison is an essential guide to a clear understanding of the actual basis of our Penal Servitude, as well as our ordinary prisons."[351]

II. Pentonville: The "Model Prison"

Pentonville Prison opened its doors on 21 December 1842, initially holding 520 male convicts who were destined for transportation and aged between eighteen and thirty-five. These men were part of an experiment: could convicts be reformed? Jebb and his colleagues believed they could, and the Pentonville model would be the way it was done. The Pentonville experiment was an attempt to continue transportation for as long as possible by sending industrious, healthy, morally reformed convicts to Australia. This would be achieved by putting the men through a reform programme at Pentonville for eighteen months, where they would be in separate confinement, perform hard labour and receive religious education.[352] As it happened, the number of people being transported declined from the 1850s as transportation came to an end.[353] The experiment was adapted to use the same tools to reform people who would then be released back into Britain. This section introduces Pentonville as the "model prison", and argues that it was a test ground for government policies. Because Pentonville was owned and overseen by the government, and the Surveyor-General of Prisons, Joshua Jebb, was particularly invested in the model prison, this was a space for the PMO to carry out the government and prison director's experiments rather than their own. Other prisons and doctors did feed into government

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[351] Ruggles-Brise 1921: 25.
[352] McConville 1998: 122.
[353] Shaw 1966; Shaw 1993: 337; Shoemaker and Ward 2016; https://convictrecords.com.au/facts [accessed 28/11/17]

policies, but Pentonville's PMO, Charles Lawrence Bradley, had less freedom to change policy than some of his counterparts. Nevertheless, he was hugely involved in clarifying what would become, longer term, widely applied government mandates for individuals and groups of convicts with perceived shared characteristics (primarily sentence time). Through examining the interactions between the governing bodies and Bradley at Pentonville, both the role of government in the control of the prison population, as well as the individual influence of PMOs under direct instruction will be emphasised.

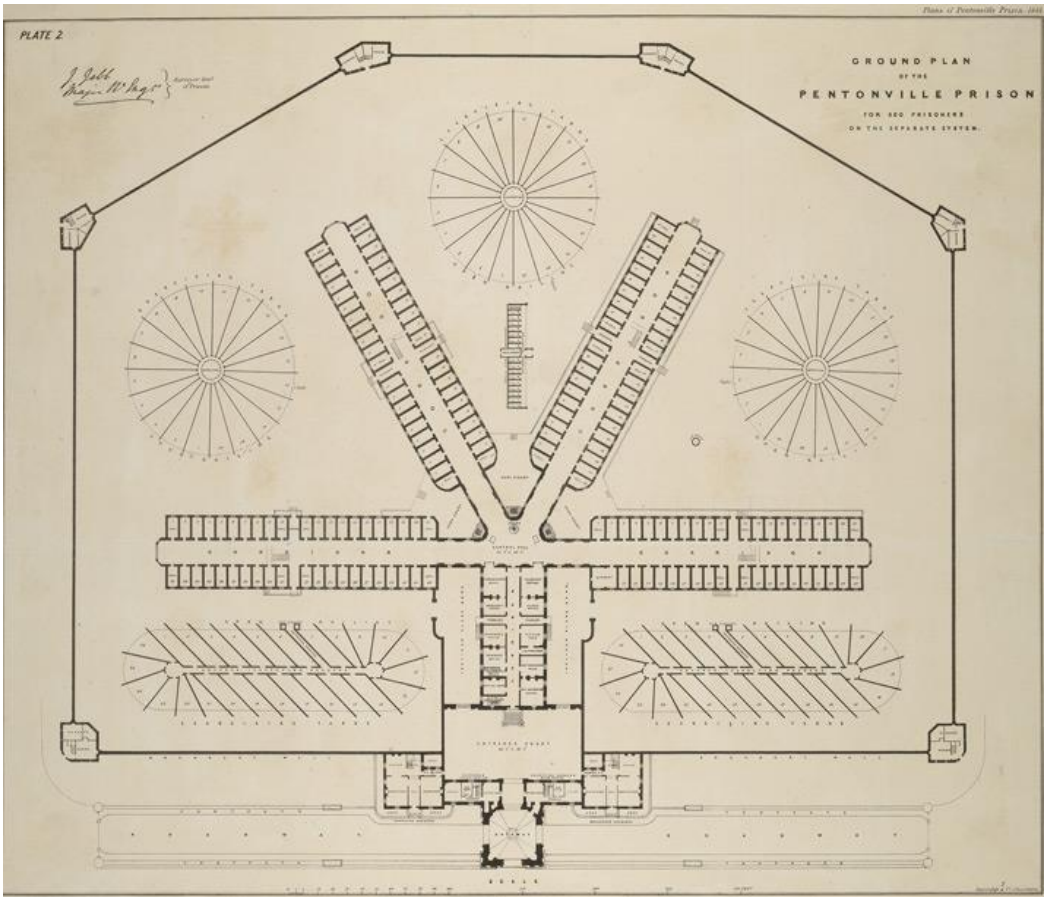

Figure 2.1 1842 Floor plan of Pentonville for 520 men

British Library. (http://www.bl.uk/onlinegallery/onlineex/crace/g/largeimage88287.html)

The rapid changes in policy reflected Pentonville's commonly understood status as the "model prison". Probably coined by Jebb, the phrase "model prison" was taken up quickly by others, including in Post Office Directories and official maps like the Ordinance Survey. The name was sometimes used, primarily by Jebb, to highlight that the design of the prison was perfect and it was used as the blue print for other convict prisons and

adapted prisons.[354] The layout inspired all new builds, and the Pentonville system was rolled out nationally between 1842 and 1878 (Figure 2.1). "Model prison" was also used to indicate that the site was used to test changes in the convict system which would be experimental and supposedly scientific before policies were rolled out across the convict system. Millbank Penitentiary was still very important because of Baly and his successors, William Guy and later Robert Gover, but Pentonville was the centre of the prison system from the perspective of the prison directors and consequently the government.

Pentonville became Britain's first attempt to bring uniformity to penal servitude, drawing on an American prison, the Eastern State Penitentiary in Philadelphia, and past attempts to build radial prisons in England.[355] Eastern State employed the "Pennsylvania System", known as solitary confinement in Britain. In this system prisoners only saw institutional officers, and very occasional visitors. By contrast, Pentonville allowed more communication with instructors and guards but also employed separate cells reflecting the Pennsylvania system. The architects of Pentonville and Joshua Jebb believed separate cells encouraged reflection and reform. The most notable difference between the two prison systems was that Pentonville employed work as well as silence to encourage reform.[356] Designed by William Crawford, Revd Whitworth Russell and Joshua Jebb, Pentonville was an attempt to correct the mistakes of Millbank and to test the separate system.[357] In 1842 the Pentonville Prison Act was passed, making Pentonville the only prison with its own Act of Parliament. This Act gave royal assent to the prison in June 1842 and was an Act "for the better ordering of prisons."[358] Pentonville was the model for the start of a government programme to build convict prisons around Britain reliant on religion,

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[354] Jebb 1842.

[355] McGowen 1998: 90; Evans 1982: 363. The Eastern State Penitentiary opened in 1829, was 'waggon wheeled' in shape (probably influenced by Millbank). The Pennsylvania System drew on Quaker ideas about isolation and reflection. Convicts were visited once a day by a warden but had no other communication. They lived and worked separately in a system designed to reform rather than physically punish. Eastern State Penitentiary [Accessed 8/9/16].

[356] Britanica: https://www.britannica.com/topic/Pennsylvania-system [Accessed 10/10/17]

[357] Although mostly credited to Jebb because he did the most self-promotion and held power within the Home Office. Crawford was District Inspector of Prisons in the 1830s and Russell was a former chaplain at Millbank, both were annoyed about the diminishing of their roles. Brodie et al. 2002: 88, 93.

[358] Duncan 2000: 9; Later, in 1853, four hand written warrants, signed and sealed by the Secretary of State and member of the Privy Council, The Right Honourable Viscount Palmerston were written which appointed Pentonville Prison, Millbank Prison, Dartmoor Prison, and Portland Convict Prison as places for confinement of males under Penal Servitude. It stated that penal servitude could be "substitute[d] in certain cases other punishment in lieu of Transportation." TNA.PCOM7/223. 1853. *Places for confinement of males under Penal Servitude sentence: Dartmoor, Millbank and Pentonville Prisons and Portland Convict Prison.*

discipline, morality and labour, eventually leading to the nationalisation of all prisons in 1877.

Pentonville originally only took men destined for Australia but deemed capable of reform, and healthy enough to test the separate system on. It was designed for male adult convicts, not debtors, females, juveniles or prisoners classified under local systems.[359] Consequently, there was some criticism when the Pentonville system was used in other prisons with different groups of people for whom it was potentially unsuitable. Generally, though, there were high hopes for the success of Pentonville, one author writing "the object of Pentonville as I understand it, is to instil into such abandoned and neglected criminals some moral and religious principles, and to induce them to reform by at once cutting off all hope of a return to their former profligate companions."[360] This was reinforced by anonymity, separating the convict from his former life. When an individual arrived at the prison they were assigned numbers and for the time they were in Pentonville there would be no use of names to cut the convict off from their former life. The number assigned was usually decided by the wing and cell occupied by the individual. For example, the occupier of Wing D, Cell 6 would be known as "D6"; within the wing they maybe just "number 6" or simply "6".[361]

Figure 2.2 Visitors at Pentonville

Surveyor-General of Prisons 1844a.

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[359] Surveyor-General of Prisons 1844: 9.
[360] Magistrate of a Manufacturing County 8 December 1843: 6.
[361] TNA.HO24. *Home Office: Prison Registers and Statistical Returns.* 1842–1875.

Pentonville very soon cemented its international status as the model prison. It was one of the first prisons of this scale built in contemporary Europe and attracted much of public attention. It was visited by a huge range of people including, Prince Albert, the King of Prussia, the King of Saxony, Grand Duke Michael of Russia, Prince William of Prussia, and Prince Alexander of the Netherlands.[362] The visitors' book did not state the professions of the people visiting, but there were regular visits. Some days, so many people came there might have been tour groups. Everyone was accompanied by an officer and the majority of the visitors appear to have been men, despite the illustration in Jebb's work including women (Figure 2.2). As well as government officials and royalty, a number of medical and clerical men can be found in the book. There were addresses from England, Denmark, Russia, Prussia, and the East Indies, all on the first page, Later, there were visitors from Greece, Portugal, Hannover, Belgium, Cuba, France, Italy, Germany, Switzerland, and Hungary...[363] Figure 2.2 shows a plate illustration of Pentonville in Jebb's book which included visitors, so this must have always been part of the plan for the prison or, when Jebb was writing less than two years after the prison had opened, it had become so.[364]

Perhaps more important than the wealthy visitors were the PMO, who visited daily, and the resident surgeon, who lived in-house.[365] The chief PMO for Pentonville from 1848 to 1870/71 was Charles Lawrence Bradley, known as Lawrence (1819–92). He was not required to live in, so resided in Islington for his entire working life before retiring to Brighton.[366] He trained at Guy's Hospital becoming an LSA in 1840, and a Member of the Society in 1842. He also became a member of the Royal Society for Chemistry in May 1841 and a fellow of the RCS in August 1856. During his career, Bradley was also a member of the Council for the Epidemiology Society, a fellow of the Microscopic Society, a fellow of the Linnaean Society and a fellow of the Zoological Society.[367] Like Baly, Bradley was very involved in the medical and research communities in London. His long list of qualifications indicates his association with other medical professionals, but also

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[362] Surveyor-General of Prisons 1844: 37; TNA.PCOM2/93 (1863). *Visitors book 1862–63.*

[363] TNA.PCOM2/93. *Visitors Book 1862–63.*.

[364] Jebb 1844.

[365] TNA.HO20/13. *Rules for the Government of Pentonville.* 1842: 53, 59.

[366] Census for England and Wales 1851, 1861, 1871, 1881, 1891. He had two children later in life, Charles (b.1866) and Beatrice Mary (b. 1868). His wife passed away early in their marriage and is not listed on the census. Bradley's sister and nephew as well as servants lived with him and his children in Islington.

[367] London and Provincial Medical Directory 1860: 108; London and Provincial Medical Directory 1865: 61.

that the prison authorities sought well-qualified men. Being a PMO was becoming a legitimate career choice for someone who could probably have run a profitable private practice. Bradley worked at Pentonville as an assistant PMO from 1842 under George Owen Rees, who retired c.1848 when Bradley took over his role. He oversaw the opening of the prison and the experiments at Pentonville during the mid-century as well as acting as the Surgeon to the Royal Caledonian Asylum and at the Holloway and Northern Islington Dispensary.[368] Like Baly, Bradley published on matters outside the prison, indicating broader interests and a research mentality.[369] In addition, he contributed along with J.D. Rendle (Brixton Prison) to the 1864 Report on Convict Prison Dietaries led by William Guy (from Millbank) for Sir Edmund Du Cane, in preparation for the 1864 Prison Act, as we shall see in section IV.[370]

In the prison, convicts and staff all followed "the rules" which were in a bound volume under the title "Rules for the Government of the Pentonville Prison".[371] Although the rules had to be obeyed, there was room for flexibility for the Prison Commissioners, as Pentonville was an experimental testing ground. The overarching rules stayed the same, but the practical details varied. The book covered how the prison would be governed, the duties and conduct of the governor and other officers, diet, clothing, maintenance, employment and discipline for convicts. For our purposes it is important to note some of the rules laid out for the PMO and resident surgeon.

Bradley had to visit each prisoner at least twice a week, more often if necessary, and record each visit in his journal, called the "The Medical Officer's General Register Book."[372] Sadly, none of the journals have survived. The design for Pentonville was intended to be as healthy as possible whilst treating convicts as uniformly as possible. Millbank taught prison authorities that it was "desirable that a prison should be built in a dry and airy, and, if possible, in an isolated situation; the former being conducive to the health of the

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[368] London and Provincial Medical Directory 1860: 108.

[369] His papers included "On Gyrodactylus" (a paper on a small ectoparasites) in *Proceedings of the Linnean Society* (1861), "Case of Fatal Haematemesis from Ulceration of Œsophagus and Perforation of Aorta" in the *Medical Times and Gazette* (1868) and "Case of Larval Tapeworms in Human Brain", also in the *Medical Times* (1869). RCS 2010a.

[370] Bradley is listed as the surgeon for Portsmouth Prison on this report and it is unclear why. At this time there was only a convict Hulk and a local gaol in Portsmouth.

[371] Compiled by The Duke of Richmond (chair), The Earl of Devon, The Earl of Chichester, Lord John Russell, Sir Benjamin Brodie (St Bartholomew's), Dr Ferguson, Major Jebb (Royal Engineers), Mr William Crawford, Reverend Whitworth Russell and Lord Wharncliffe (President of the council). Approved by JRG Graham (HO) on 17 December 1842. TNA.HO20/13. *Rules for the Government of Pentonville.* 1842.

[372] TNA.HO20/13. *Rules for the Government of Pentonville.* 1842*:* 53, 55.

prisoner, and the latter to their quiet and seclusion."[373] Also, it was commonly understood that "the ventilation of a cell cannot fail to have a direct influence on the health of a prisoner."[374] For Jebb, this was absolutely central to the design of Pentonville, and he was clearly very pleased with the ventilation system and valued its health benefits, writing at length along with illustrations to explain it. Although not stated, the ventilation system was probably mostly Jebb's own design, whereas the majority of the building was designed with architects.

As well as having clean air, it was necessary for the place to be impeccably clean for physical and moral hygiene. Pentonville was described as having a "perfectly Dutch-like cleanliness pervading the place", with polished asphalt floor and carefully dusted stucco walls, all measures intended to improve morality and health.[375] It is also possible that this environment was intended to be reminiscent of simple Protestant churches thus aiding moral and spiritual reflection by association. In order to maintain this sanitary system, on the first Monday of the month (or as close as was convenient) the PMO was expected to inspect the entire prison with the governor to ascertain cleanliness, warmth, ventilation and drainage as well as seeing every prisoner. He was also required to visit the kitchens frequently.[376]

In his Surveyor-General's Report of 1844, Jebb noted that, as per his design, the cells were "spacious and thoroughly ventilated", so that if a prisoner was sick, in most instances he could be treated in his cell by the doctor. It was only if they needed a constant nurse, required surgery, or were infectious or had a "malignant fever" that prisoners left their cells for treatment.[377] According to Jebb, between the prison opening in 1842 and the time of writing in 1844 there were only three or four cases where the prisoner was sick enough to be moved to the convalescent rooms.[378] These rooms were in the central space behind the chapel, as in Figure 2.3 It is unclear if that is because it was free space or if there were spiritual reasons for this location. There were two medical rooms on each floor, plus the surgeon's office on the top floors as Figure 2.3 shows. Figure 2.4 is a photo of the inside of the infirmary taken towards the end of the century.

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[373] Surveyor-General of Prisons 1844b: 1.
[374] Surveyor-General of Prisons 1844a: 6–7, 17.
[375] See Mayhew and Binny 1862: 118–121 for a detailed description of the inside of Pentonville.
[376] TNA.HO20/13. *Rules for the Government of Pentonville.* 1842: 56.
[377] Surveyor-General of Prisons 1844a: 17.
[378] Surveyor-General of Prisons 1844a: 17.

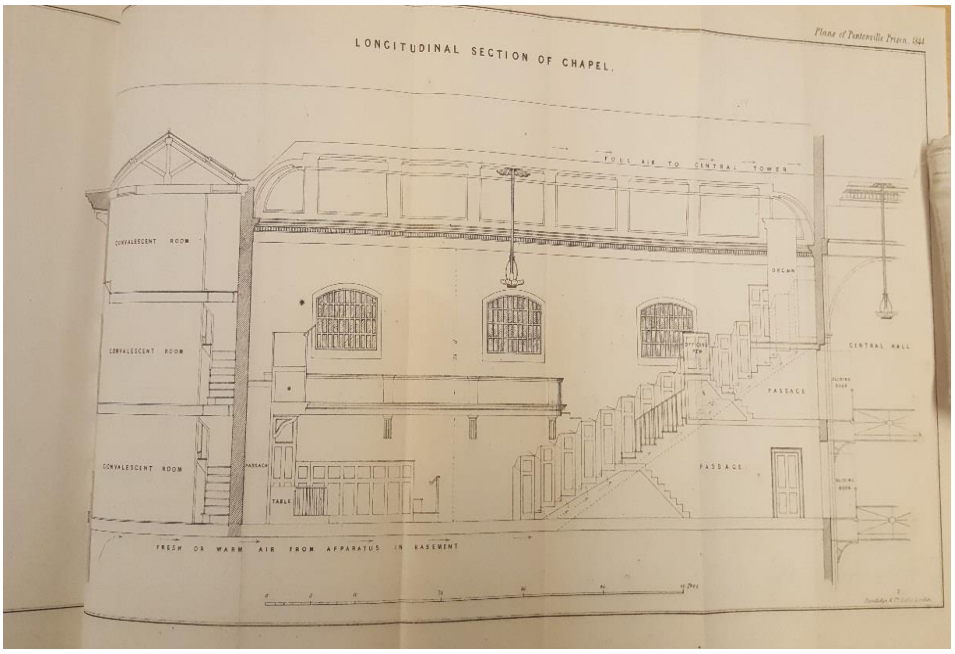

Figure 2.3 Plan of the chapel and convalescent rooms

Surveyor-General of Prisons 1844a.

Figure 2.4 Pentonville Infirmary

Date unknown (before 1895) TNA.Copy1/420/179

The convalescent rooms were not intended to be used very much, but if they were it was likely that the surgeon, who lived on site, would oversee most of the care. In the Rules, the surgeon was instructed that it was "his duty to compound and dispense all the medicines prescribed, and to perform all minor surgical operations, as bleeding, cupping,

and tooth-drawing, ordered by the Medical Officer." He also had to "be competent to render temporary aid in case of accidents occurring in the prison, or other emergencies requiring immediate medical assistance."[379] As part of his duties, the surgeon cared for the surgery and medical supplies, and complied lists of orders needed.[380] Despite all this responsibility, the surgeon was second to the PMO, who was a physician. Consequently, he "shall act as clerk to the Medical Officer, making such entries in his journals and registers, and writing such demands &c., as he may direct; but all such entries and demands shall be signed by the Medical Officer himself." And most importantly "in all matters relating to the care and treatment of the sick, he shall strictly follow the instructions of the Medical Officer."[381]

The surgeon may have been below the PMO, but the chaplain was generally seen as the PMO's equal, responsible for the moral and spiritual health of the prison. Alongside the medical staff the chaplain was required to visit the sick in their cells or the infirmary, and was required to visit every cell or room occupied by convicts daily and "attend, at all reasonable times, any prisoner who may require his spiritual advice and assistance."[382] The chaplain and the PMO both played their part in the prison system and the 'science' of the separate system included religion, which contributed significantly to the perceived reformatory nature of the separate system. In-house prison chaplaincy was a new profession, like that of the prison doctor. Each day the chaplain performed morning and evening prayers, visited each cell and spent time with the sick. Usually he was on duty for eight hours and the assistant chaplain was available for five.[383] In order to encourage Christian lessons, services were held on Sunday and high holidays.[384]

Both chaplains and PMOs kept daily record books and contributed to the quarterly and annual reports. Both often drew on observation and statistics to understand why inmates committed crimes and it would appear that the chaplains rarely believed crime was just caused by "evil"—it was a more complex character trait than that. When Pentonville opened, mental health was the responsibility of the chaplain, reflecting the moral conception of insanity in the 1840s. The rules stated that if a prisoner's state of mind

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379 TNA.HO20/13. *Rules for the Government of Pentonville.* 1842: 59.
380 TNA.HO20/13. *Rules for the Government of Pentonville.* 1842: 59.
381 TNA.HO20/13. *Rules for the Government of Pentonville.* 1842: 60, 59.
382 TNA.HO20/13. *Rules for the Government of Pentonville.* 1842: 47.
383 TNA.PCOM2/353. *Chaplains Journal 1846–51.* 16 May 1846.
384 TNA.PCOM2/353. *Chaplains Journal 1846–51.*

appeared to require "special assistance" this should be reported to the chaplain.[385] In 1853 assistant Chaplain John Burt noted that "under any system of severe punishment, a *degree* of risk to the mind is therefore inevitable."[386] This was so especially "the reasoning faculty is weak, and the passions excessive and uncontrolled."[387] There were no clear rules as to what the chaplain should do to manage the risks or to approach treatment. The treatment of the insane changed over the century, as will be discussed in chapters 3 and 4, but it was an immediate concern, as seen in the opening quote to this chapter.

As well as dealing with aspects of prison medicine that were obviously 'medical', the PMOs managed aspects of life relevant to health. For example, everyday fabrics like clothing and bedding were the PMO's responsibility. Each convict in Pentonville was issued with a jacket, waistcoat, a cloth stock, a cotton or flannel shirt as ordered by the PMO, stockings, a pocket handkerchief, a cap, shoes and a belt, if the individual had "been in the habit of wearing one."[388] The PMOs had the right to direct the supply of flannel and such other articles "as he may deem necessary in particular cases," allowing them to manage health through cleanliness, fabric choices and temperature.[389] On entry to the prison, each convict was issued with a hammock, hair mattress and pillow, two sheets, two blankets, and a coverlet. The medical officer had the option, in severe weather and in particular cases, to enforce the supply of additional bedding if he chose.[390] These considerations were solely the responsibility of the PMO and the rules did not seem to allow for anyone else on the prison staff to make such judgement calls.

This is a very brief overview of the design and policies implemented at Pentonville when it was designed as *the* "model prison". It was carefully designed to balance punishment, reform and health as exemplified by the governor, chaplain, and PMO, and as reflected in the architecture, management and policies relating to everyday life. Over the following twenty-five years small changes were made to the policies which affected the convicts everyday lives the most. Separate confinement and hard labour, which constituted most of the convicts' punishment, will be discussed in Section III, before diet and the effects of nutritional science on prison policy is explored in Section IV.

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[385] TNA.HO20/13. *Rules for the Government of Pentonville.* 1842: 56.
[386] Burt 1852: 89.
[387] *Ibid*: 89.
[388] TNA.HO20/13. *Rules for the Government of Pentonville.* 1842: 90.
[389] TNA.HO20/13. *Rules for the Government of Pentonville.* 1842: 90.
[390] TNA.HO20/13. *Rules for the Government of Pentonville.* 1842: 90.

III. Confinement and Labour: Challenging Body, Mind and Morals

The American sociologist, Charles Ellwood, whom we met in the introduction to this thesis, claimed in 1916 that English prison discipline was "exceptionally good". It was "maintained almost wholly by the use of solitary confinement, lessened diet, or the taking away of privileges as punishment." There were rarely instances of flogging or other forms of corporal punishment.[391] He continued, "the object of labor in the English prison is not so much to render the prison self-supporting, as to secure for the prisoners the disciplinary and reformative effects of labor."[392]

Experiments were carried out at Pentonville on the impact of confinement and hard labour. PMO Bradley, his staff, and the prison commissioners were very aware of maintaining bodily health. The all-encompassing separate system, managing every aspect of prison life (for convicts and staff), was initially trialled and evolved at Pentonville. As discussed, the separate system basically kept convicts away from other convicts. It differed from the silent or solitary systems being trialled in the USA.[393] As John Burt, a chaplain at Pentonville said, "in every publication of authority, the distinction has been made very clearly drawn between *solitary* imprisonments, properly so called, and the s*eparate* or Pentonville system" He explained. "Under the former, the prisoner is wholly deprived of intercourse with other human beings; under the latter, he is only kept rigidly away from other *criminals*, but is allowed as much intercourse with instructors and officers as is compatible with judicious economy."[394]

The separate system created uniformity within the prison, and, scaled up, it created uniformity across all convict prisons, and after nationalisation in all types of prison across the country. Whether focused on deterrence or reform, almost all Victorian administrators felt that imprisonment should be painful. At Pentonville "the distinctive characteristic of the discipline was the COMBINATION *of severe punishment with a considerable amount of instruction and other moral influences.*"[395] Pain could be justified under the Benthamite initiative which launched Millbank and was taken up by Joshua Jebb, Pentonville's designer. For Bentham "'all punishment in itself is evil' as it inflicted pain", but if this pain had to be inflicted upon an individual, it had to serve a useful purpose—in other

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[391] Ellwood 1916: 27.
[392] *Ibid*: 28.
[393] See pages 14 and 15.
[394] Burt 1852: 93
[395] *Ibid*: 3. Original emphasis.

words, reform the character.[396] Reformation was not intended to imply leniency towards criminals; instead, it justified rigour for the offender's own good.[397] Jebb certainly believed that imprisonment should be a punishment. He also believed that extra punishments such as the bread and water diet or extra revolutions on a treadwheel were necessary to reform the character and enforce good behaviour. "As the very name of the punishment [hard labour] implies, labour was at the heart of penal servitude."[398]

This section considers how the separate system evolved at Pentonville. This scheme and the safeguards for health developed at Pentonville were employed in all Victorian prisons thereafter. It asks how individual punishments and general "hard labour" changed in the mid-nineteenth century, again focusing on the careful balance between health and gruelling punishment which was sought in the Pentonville experiment. When Pentonville opened convicts could only speak to the warders, teachers, the chaplaincy, and the medical staff. They could not, under any circumstances, speak to each other. This was an attempt to stop the spread of immorality and criminality amongst the population, reduce the "infection" of the casual or young offender by the hardened habitual criminal and, importantly, to enforce discipline and stop plans for insubordination. The quiet and separation was meant to encourage personal and religious reflection as well as enforce obedience. It was almost absolute with prison guards wearing slippers so they did not disturb the quiet.[399] The cells at Pentonville were designed to administer this. The cell specification had been tested through experiments at Millbank to ensure it worked as well as possible.[400] As we saw earlier in the chapter they were identical and could be used as medical spaces. Most of the time they were for self-reflection, work and sleep (Figure 2.5). Total separation, according to Burt, was not so rigidly enforced by 1852, when some work tasks allowed for communication.[401] This (very small) relaxation of the principle was to encourage more productive labour and reduce instances of insanity. Burt lamented this, arguing that "the isolation of the criminal from other criminals was the basis of the whole system."[402]

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396 Henderson *et al*. 2015: 12; Wiener 1995: 47.
397 Goldman 2002: 149
398 McConville 1981: 396.
399 Evans 1982: 354.
400 Brodie et al. 20002: 90.
401 Burt 1852: 40.
402 *Ibid*: 40.

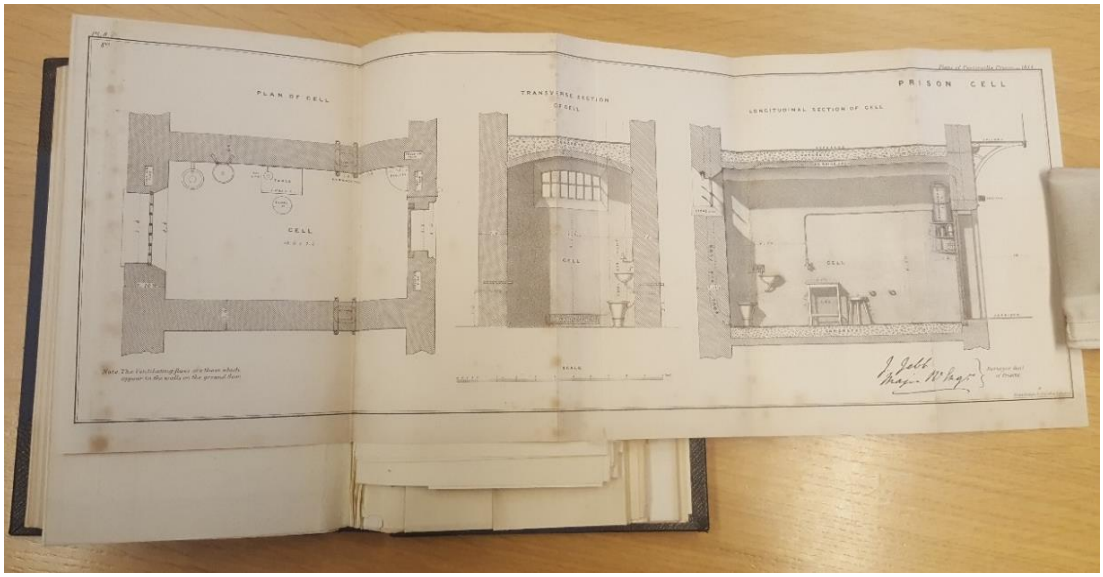

Figure 2.5 Jebb's designs for the cells at Pentonville

Surveyor-General of Prisons 1844a.

The length of time that a convict spent in separate confinement was perhaps the most discussed element of the experiment when Jebb and the prison authorities were creating the Pentonville system. The term of imprisonment and separation at Pentonville started as eighteen months in 1842, was reduced to fifteen months in 1848, then to twelve in 1849.[403] In reality, "the average term of imprisonment for all prisoners removed in the ordinary way was, during the first five years, [was] about nineteen months; during 1848, about sixteen months; and during 1849 and 1850, between eight and nine months, inclusive, in many cases, of a period of protracted association previous to removal" [time in another prison].[404] Burt feared that changes at Pentonville would influence other convict prisons. Noting Pentonville's status as the model prison he observed that "when these changes have been made at the prison erected for a *model* of the separate system, and placed under the immediate management of the Government, it will undoubtedly be inferred, that the more rigorous discipline and the longer term have been found inoperative or unsafe."[405]

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[403] *Ibid*: 42.

[404] *Ibid*: 43; TNA.HO45/2134. *Correspondence…. regarding the period of probation to be undergone at Pentonville Prison and the employment and discipline of convicts on the dockyards at Woolwich.* 8 February 1847. 97 people were held more than nineteenth months (most by three to four months) in 1847.

[405] Burt 1852: 4.

When the Pentonville experiment began in 1842, Millbank had started to introduce elements of the system, but the physical structure of the building proved problematic. In preparation for Pentonville's opening, William Baly at Millbank was consulted. He was against the separate system, believing it encouraged disease and was injurious to mental health. In 1842, Parliament recognised off the back of Baly's report that it was unsafe to maintain separate confinement for long periods of time.[406] In 1845 Baly used a statistically based argument (and a forerunner of subsequent prison analysis) to argue that "the high rate of mortality which prisoners suffer is really the effect of their punishment and is not owing to the unhealthyness of the class whence criminals are, for the most part derived."[407] Consequently, he thought separate confinement, and to a lesser degree hard labour, should be reduced and carefully monitored. Despite Baly's warnings, the Prison Commissioners for Pentonville argued in 1848 that it was necessary that the separate confinement period for convicts joining Pentonville be uniform and of a set length as "a matter of justice" but also that, if prisoners were there from one to twelve months, "it would be scarcely possible to estimate, by any just or common standard, the degree of good conduct, or supposed reformation for which they eventually should have credit." It was agreed initially that "for the large majority of prisoners, the period of eighteen months in separate confinement is not too long—on the other hand they are disposed to think that it should be fixed as the maximum."[408] It was believed that prisoners should know when they were leaving, as not knowing or having their time extended caused depression.[409]

The debate was not resolved. In 1849, Baly, Jebb, the governor and the chaplain at Millbank entered into communication about separate confinement. Baly argued for a six-month limit of separate confinement, the removal of masks (which covered convicts faces to enforce anonymity and reduce communication), and the opening of cell doors during the day.[410] Jebb, however, claimed that prisoners did not spend enough time in separate confinement before going to the public works. Jebb believed six months' separate confinement would not damage health, and longer periods had been tested at Pentonville

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406 Millbank Prison Act, 1843.

407 Baly 1845: 275.

408 TNA.HO45/2134. *Correspondence…. regarding the period of probation to be undergone at Pentonville Prison and the employment and discipline of convicts on the dockyards at Woolwich.* 19 February 1848. Letter to Sir George Gray (HO) from Hawkins (Commissioner).

409 TNA.HO45/2134. Correspondence…. regarding the period of probation to be undergone at Pentonville Prison and the employment and discipline of convicts on the dockyards at Woolwich. 19 February 1848. Letter to Sir George Gray (HO) from Hawkins (Commissioner).

410 TNA.HO45/2953. *Prisons and prisoners; Infectious diseases; Sanitation and Sewage; Poor Law and Paupers*. 28 April 1849; The masks were meant to conceal shame rather than enforce anonymity and silence according to Mayhew and Binny 1862: 141.

with no damage (and approval from the Secretary of State).[411] He refused to end separate confinement by allowing cells to be shared by three men, although it was concluded this was acceptable in times of overcrowding.[412] Baly argued that, although Pentonville may be the model prison, Millbank had operated for longer (and implicitly he implied he had worked in prisons and medicine for longer) so his advice and Millbank's policy should be followed. Eventually, Baly's arguments did have an impact on policy when in 1850 the "Grey Committee", officially "the Select Committee on Prison Discipline", agreed that periods of separation should be limited to twelve months. But they did argue that convicts should start their sentence on the silent system and then move into the separate system.[413] This policy was to establish such a system "as would ensure the sentences of the Courts of Justice being strictly carried into effect, and which would at the same time tend to improve the morals of convicted offenders."[414] After 1850, the period of separation at Pentonville officially remained at twelve months. The increase in convict numbers meant that they needed to be moved to the public works with relative speed, limiting the time they spent in confinement.

The time spent performing hard labour was not reduced, however. Hard labour was central to penal servitude. Although many of the prison chaplains had faith in the reflective influences of rigid separation system and the reformatory powers of God, the prison authorities generally did not. They believed religious reform had to be accompanied by physical punishment and reform through labour. Many really did believe in the reforming power of pain. On a day to day basis this came in the form of hard labour, but misconduct resulted in specific punishments. "Hard labour" meant more than working hard. The term was suitably vague to be applied across all types of prisons and include public works projects. The Carnarvon Committee (1863) demanded that the labour should cause sweat and heavy breathing.[415] Consequently, it was intentionally physically demanding and dull, punishing and deterring simultaneously. Bible quotes were used to support why convicts

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411 TNA.HO45/2126. *Prisons and Prisoners: Letters from Jebb…*14 February 1849.
412 TNA.HO45/2126. *Prisons and Prisoners: Letters from Jebb…*3 February, 14 February 1849.
413 Select Committee on Prison Discipline 1850: iv–v.
414 Report of the Select Committee on Prison Discipline 1850: iii.
415 McConville 1998: 132.

should do hard labour, including Genesis “God never made man to be idle” [Genesis ii 5] and “an idle man is sure to get himself into mischief” [Ephesians iv 28].[416]

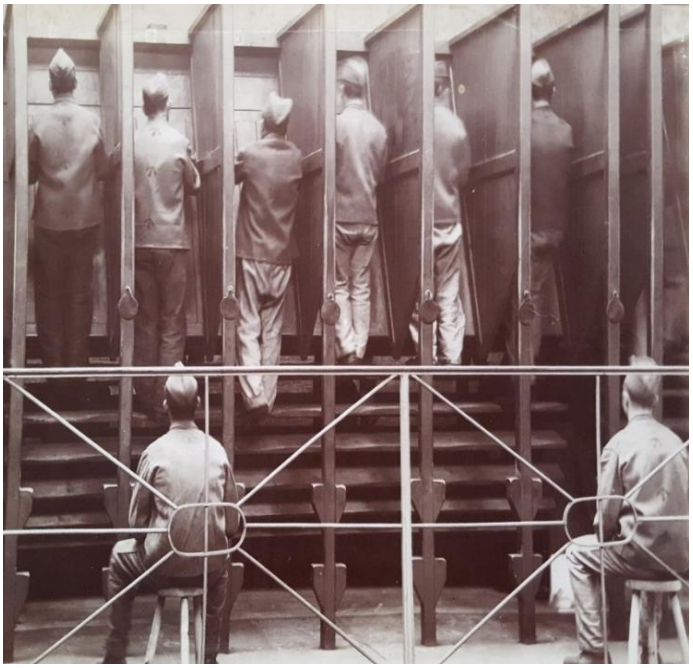

Figure 2.7 Treadmill at Pentonville

Date Unknown (before 1895) TNA.COPY1/420/176

Figure 2.6 Hand crank at Wormwood Scrubs

Date unknown TNA.COPY1/420/171

Figure 2.8 Pulling carts at Wandsworth Prison

Date Unknown TNA.COPY1/420/180

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[416] Field 1848: 23.

Initially, hard labour was entirely punitive. It was considered character-building to walk miles on a treadmill (Figure 2.6) to achieve nothing but a step count. It was soon realised that hard labour could also force convicts to contribute to their own upkeep whilst undergoing industrial training. The treadmill or the hand crank (Figure 2.7) could be used to ground flour, for example. Alternatively, agricultural work could be done by convicts (Figure 2.8) which was also useful training for the convict "public works prisons", to which convicts were sent after separate confinement. There, hard labour continued in the form of agriculture, industrial projects and construction. Productive labour, like agricultural work, was actually part of Bentham's vision for the Panopticon prisons. In his vision prisons would be run by contract management, meaning that the governor would profit from prisoner's labour and would thus have an interest in their health and moral reform. Ill health cost money and deaths in the prison would be faced with financial penalties so financial interest and duty would be duly balanced.[417]

After 1869, in the Du Cane era, productive labour was the focus for prisons to reduce costs. Convicts had to prove they were sick in order not to work and did not receive reward points called "marks" whilst in hospital. Men sentenced to climb the treadmill had to be carefully monitored by the medical staff. The extreme exertion required, including approximately 2,000 steps before breakfast, was physically exhausting and dehydrating. The chance of strain, injury or falling was high, particularly for beginners. Du Cane appointed a committee of scientific and medical men to advise him on how much hard labour was appropriate, or as McConville put it could be "safely extracted".[418] The committee concluded that 8,640 feet was an appropriate target for a treadwheel "because this was an objective and scientific judgement, touching on quantity and physical capacity, the basic notion of hard labour was taken for granted by the committee."[419] Similar risks came with the hand crank. Although there was no risk of falling, there was high risk of back injury. Other tasks were equally dangerous; Oakum picking (shredding old rope) ran the risk of split fingers and infection, whilst working in the kitchen or laundry was heavy, hot work where convicts contended with fire and industrial hazards. Additionally, almost all prison work was intentionally mind-numbingly dull. Consequently, it probably increased the likelihood of mental illness or suicide, as well as physical injury.

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[417] Henderson *et al.* 2015: 15.
[418] McConville 1998: 132.
[419] *Ibid:* 132.

Prisoners who misbehaved were "tried" within the prison by the governor and the prison commissioners. If found guilty of misconduct, they were punished. Most convicts were disciplined with a bread and water diet, punishment cells, or occasionally whipping, the refractory ward (isolation cell) or the "penal claps".[420] All punishments had to be noted and observed by the PMO. In these instances, the rules stated that "his order for preventing injury to health shall be obeyed."[421] The governor's power to inflict physical punishment beyond hard labour was limited. Prior to 1864, corporal punishment could only be authorised by the prison director when he made his monthly visits. After 1864, only the magistrates could issue such punishments when petitioned by the prison commissioners.

By the 1860s punishment for disobedience was usually twenty-eight days in "1st stage penal class", which meant solitary confinement and minimal food (as experienced by convicts when they first entered Pentonville). Edward Chisnall, for example, concealed in his cell ventilator a saw made from the opening of a trap door. In 1861, he received twenty-eight days in the first penal class and could not leave Pentonville for a year.[422] William Madden rang his bell unnecessarily on two occasions, and he falsely reported not having enough meat, having hidden it under some bobbins, and later broke the winder, his plate, table, knife and drinking cup. He got three days punishment diet followed by twenty-five days as a "first class" prisoner, and forfeited six weeks remission.[423] Having irritated the authorities in 1862, in contrast to Chisnall, Madden received less bread and water punishment than he might have otherwise done, but the maximum in the first class and he effectively lost hope of early release from Pentonville. Whilst these men were under punishment they would have been carefully monitored to check the punishment was not injurious to health. After 1864, the enforcement of bread and water diets was limited to three days, although the directors had the power to enforce bread and water for up to twenty days.[424]

The "1st penal class" was one of four penal classes a convict could be placed in at Pentonville (and other prisons had similar systems). Everyone started in class one, the most extreme form of separate confinement with the least food, but could work up to class four which allowed some talking with other convicts, known as "association". The class a convict belonged to dictated his diet, exercise regime, work, and the degree of separation

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[420] See TNA.PCOM2/91. *Directors' Orders Book 1854–63.* 19 October 1857.
[421] TNA.HO20/13. *Rules for the Government of Pentonville.* 1842: 55.
[422] TNA.PCOM2/91. *Directors' Orders Book 1854–63.* 29 October 1861.
[423] TNA.PCOM2/91. *Directors' Orders Book. 1854–63.* 27 May 1862.
[424] McConville 1981: 411.

he was subjected to. These classifications helped the PMOs determine the convict's state of health and allowed for quick judgement if a change in diet or work was needed, as the class would immediately tell the PMO all he needed to know about the individual's day to day life inside the prison. A prisoner's class was initially dictated only by the amount of time he had spent in prison, but a reward system called the "mark system" was quickly imported back from the penal colonies and trialled at Pentonville. Good behaviour could be rewarded with the comforts of moving up a penal class or early remission; bad behaviour prevented this happening.

The mark system was introduced initially to the penal colony on Van Diemen's Island by Captain Alexander Maconochie in the 1830s. Maconochie's system was "unashamedly reformative", valuing reform over retribution or deterrence.[425] It also "advocated task sentences rather than time sentences".[426] The mark system was adopted in the UK and was seen to be a positive reinforcement of behaviour and (for a short while) it was perceived to be better than physical punishment in instances of poor conduct because it had longer-term reforming effects. In Maconochie's original system a convicts release or rewards were related to the completion of tasks rather than period of time, this was meant to reinforce the lessons learnt.[427] Maconochie felt that physical punishment at best created temporary obedience and resentment, which would not follow through to good behaviour outside the prison, whereas the mark system trained people to be good free men and could improve morale.[428] Maconochie sought to reward and punish using the mark system in ways which would bear resemblance to life outside prison, meaning that in his system nothing would be given for free. Everything from food, bedding and clothes to education and the right to talk to others had to be earnt. Effectively, convicts had to work to survive, and they had to work hard to earn freedom.[429] This system was admired by prison reformers like Mary Carpenter, Frederick Hill, and Charles Dickens but was not taken up in convict prisons to the degree Maconochie recommended. Physical punishment still existed within the prisons and basic provisions had to be provided as it would not do to let convicts starve or freeze. Early remission was later removed as a possible reward under Du Cane's leadership in the 1860s and replaced by alternatives, such as additional food or

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[425] Moore 2001: 38. See Barry 1958, White 1976, Moore 2001 and Maconochi's own publications for more on the introduction of the mark system.
[426] *Ibid:* 38.
[427] Maconochie 1839: 19.
[428] Wiener 1990: 114–115.
[429] Wiener 1990: 115.

early tickets-of-leave.[430] The ticket-of-leave system, and indeed extra food, were not popular with the public so were very difficult for convicts to obtain. Under the mark system, convicts had to prove they were *good*, rather than just *not being bad* to earn rewards. The system was encouraged by some PMOs, like John Campbell, whom we shall meet in chapter 3, because it reduced the chance, of malingering.[431] Many variants of the mark system meant that the sick could not earn marks, as they were not working or contributing to prison life and were probably flouting the rules of separation when on collective wards.

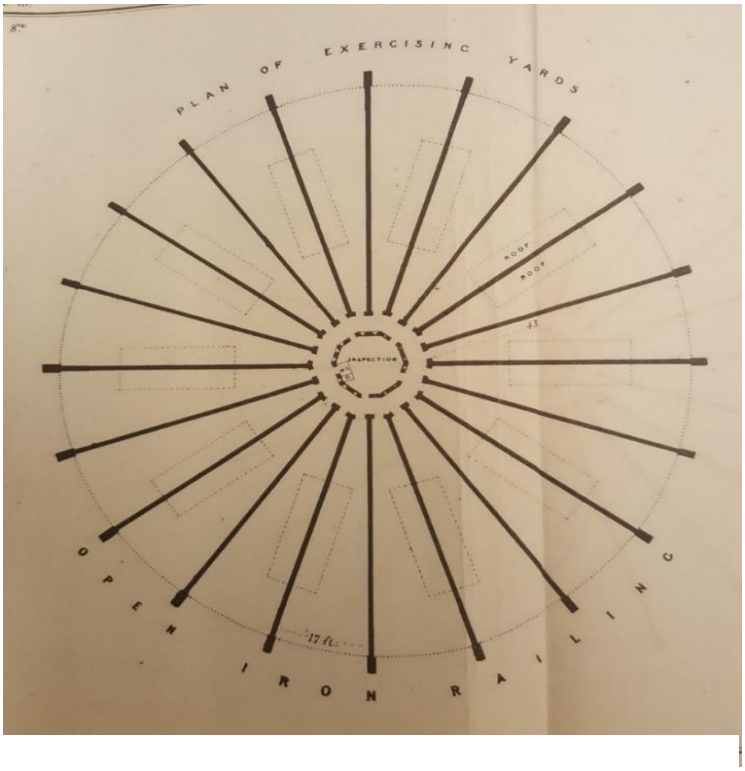

Figure 2.9 Plans for the exercise yard at Pentonville

Surveyor-General of Prisons 1844a.

The most likely places for convicts to associate without permission was the exercise yard, or the hospital if there was one. Exercise periods were potentially dangerous times for the separate system, since the convicts were out of their cells, en-masse. There was increased chance of communication, escape attempts and threats to the guards. However, exercise was seen as imperative to maintaining health. Like the building, the exercise yard was

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[430] McConville 1981: 400; Red stripes were introduced in the 1850s at Pentonville as a physical indicator of the progress towards a ticket of leave. One Red stripe represented six months impeccable behaviour, rewarded with being able to work better jobs and some were allowed to work in association a few were allowed visitors. Only about 8% of convicts achieved the level of behaviour required in their first six months of imprisonment to get a red stripe. Duncan 2000: 45.

[431] Campbell 1886; Watson 1994.

panopticon-shaped in its design (Figure 2.9). Convicts walked along prescribed routes at a set pace and a set distance apart. This can be seen in Figure 2.10 which shows the exercise at Wormwood Scrubs, which was similar to Pentonville. The design aimed to reduce any chance of talking but encouraged movement for the period that the convicts were outside. The openings in the railings around the perimeter were to encourage air flow; at the time the prison was in the countryside and agricultural spaces had perceived health benefits. Some believed that the separate system and seclusion in a cell caused mental and physical weakness and a "pallid appearance". But working and exercising all day, we are told by Burt, actually made them healthy, as evidenced by the "excellent health" of those who were transported to Australia and arrived looking "robust".[432] Exercise was something deemed necessary for convicts and was also used as a treatment. From 1852, for example, it was decided to increase exercise and this included "brisk walking outside" to help improve mental health in the prison. This was deemed successful.[433]

Figure 2.10 Exercise yard at Wormwood Scrubs

Date Unknown. TNA.COPY1/420/174

Each element of a convict's day was carefully managed, from the route he walked in the exercise yard to the distance he stood from other convicts. They were punished through the separate system and through labour but the men at Pentonville were also meant to be

[432] Burt 1852: 159–160.
[433] Mayhew and Binny 1862: 115.

positively influenced by education, religion, traditional schooling, and taught practical skills so that they would be employable after their sentence and useful during it. These different forms of education were to reform the mind. Burt told his readers, "a distinction is sometimes drawn between a general renovation of the moral character, and the determination to abandon a criminal career from fear of a repetition of punishment—the effect being termed reformation only in the former case, and in the latter intimidation."[434] Burt saw prisons as reforming then punishing convicts, but it was not a deterrent to others in his mind. Strains on the system and changing philosophy meant that the focus was on learning a trade. This became particularly important under Du Cane, who believed that the prisons should cost the public as little as possible, so that convicts had to provide for themselves as much as possible. This is not to say religious lessons were lost. There were daily chapel services and the Bible was the only reading material in the cells. Under Du Cane, there was a reduction in the time dedicated to education, as it had no quantifiable benefit and interfered with work. It was expected, however, that convicts should learn to read and write, and they could not reach the top of the class system without doing so. Education was both a duty and a privilege.[435]

Although employed to educate and reform convicts, another Pentonville chaplain, Rev. Joseph Kingsmill, said "no human punishment has ever reformed a man from habits of theft to a life of honesty—of vice to virtue nor can any mode of treating prisoners, as yet thought of, however specious, accomplish anything of the kind. Good principle and good motives are the sad wants of criminals. God alone can give these by his spirit."[436] His views, expressed in 1862, did not match those of the prison authorities, who still believed that physical punishment was a necessary part of reformation. Social commentators Henry Mayhew and John Binny argued that miracles would not reformative convicts; instead, they put their faith in earthly systems of reform.[437] The physical structure of the prison created the reform process, enforced by the system of separation created at Pentonville. The Pentonville experiment changed the emphasis on punishment and reform over time but always tried to achieve both. The whole process was overseen by the medical staff. In this section, it has been suggested that dietary punishment was an important part of prison discipline. Diet was not only a punishment for misdemeanours, but also part of the penal

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[434] Burt 1852: 6–7.
[435] McConville 1981: 410.
[436] Kingsmill as quoted in Mayhew and Binny 1862: 111.
[437] Mayhew and Binny 1862: 111.

process. The staff had to find ways to nourish and punish with food throughout a convict's incarceration and it is this challenge that we turn to in section IV.

IV. Food and Nutrition: The Science and Politics of Prison Dietaries

It was felt by the prison authorities that diet was intrinsic to health. It was believed that good diet enabled labour and therefore reform, and it could also be used as a method of punishment. Pentonville tested different diets in relation to the separate system, and from this more general conclusions were drawn about institutional diets and nutritional science. Research was undertaken in the prisons by doctors from within and outside the system which informed government policy. Although much of the research on nutrition was done outside of Pentonville, the prison provided a testing ground for government policy and a feedback loop became necessary in order to create standardised, healthy, labour-encouraging, efficient, and cost-effective diets. It was envisioned that all prisons would have the same diet and Pentonville was going to allow the government to implement this.

As with ventilation and the infirmaries, Jebb's plans for the prison included architectural and mechanical considerations for the distribution of food. Prepared in the prison's basement in the kitchen "fitted with a steam apparatus", meals had to be weighed and distributed three times a day around the prison.[438] Jebb built mechanical devices to make this easier and more efficient. Figure 2.11 shows his design. In order for this design to work, the food had to be packed carefully. Tins were designed to fit into trays which would hold the prescribed weight of food. The trays (Figure 2.12), fitted into the machine before being distributed along the wards in a similar manner to Figure 2.13, which shows a meal time at Wormwood scrubs which used a system also designed by Jebb based on his Pentonville success.

[438] Surveyor-General of Prisons 1844a: 14.

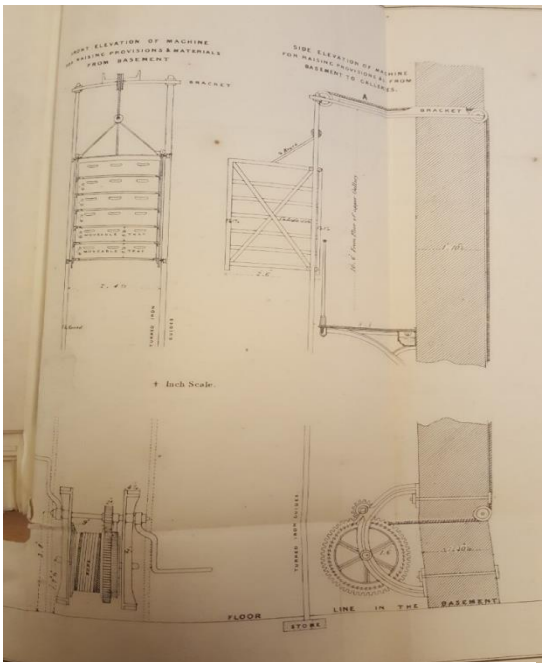

Figure 2.13 Machines to move food trays

Surveyor-General of Prisons 1844a

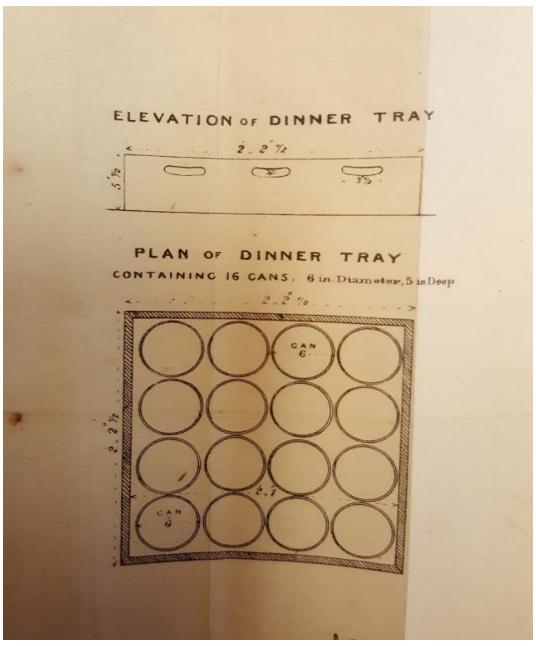

Figure 2.12 Plans for food trays

Surveyor-General of Prisons 1844a.

Figure 2.11 Distributing food in Wormwood Scrubs

Date unknown. TNA.COPY1/420/184.

Burt wrote "the Pentonville Commissioners bestowed much attention upon the subject of diet during the first year after the prison was opened… The liberal dietary finally adopted has been objected to by some persons as an undue indulgence to the criminal, and as a necessary consequence of the separation."[439] The philosophy and science behind prison diet varied over the nineteenth century and experiments were carried out at Pentonville to ascertain a cheap, but healthy and nutritious diet. Regardless of what experiments were taking place, the PMO was obliged to oversee the dietary arrangements and maintain standards of health. The rules included instructions for the PMO, surgeon and cooks about diet.[440] George Owen Rees, the PMO when Pentonville opened in 1842, and his successor Lawrence Bradley, were charged with controlling diet from the start. They weighed inmates regularly to measure the effects of the dietary plans. They tried four diets between when the prison opened and early 1844, all of which caused weight loss. In January 1844 a "successful" diet was introduced. It was designed to provide the "scientific minimum" without being hazardous to health as measured by weight.[441] This diet has been identified as historically significant, being "the only convict prison diet to be determined by experiment" and the proven minimum for prison dietary requirements.[442] In fact, it was not the only diet determined by experiment; a number of dietary experiments; were trialled at Pentonville.

Victorian prison diets stemmed from Rees and Bradley's experiments from 1842 to 1844. These in turn developed from the diet proposed by Sir James Graham (Secretary for the Home Department) in 1842, which predominantly featured bread, gruel, potatoes, meat, soup, and cocoa.[443] Variants on this theme could be found in almost every prison in the country, (convict and local prisons, hulks, and reformatory schools), for most of the nineteenth century, including in Pentonville.

Morally, it was believed that the criminal should not be as well fed as the pauper, and the pauper in the workhouse should not have more of anything than the poor but hard working honest labourer.[444] This relative food allowance is part of what has been termed the "principle of less-eligibility" by Heather Tomlinson. This built on Bentham's "'rule of

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[439] Burt 1852: 158.
[440] TNA.HO20/13. *Rules for the Government of Pentonville*. 1842. The page with rules about diet has been cut out of the Pentonville rule book at TNA, it is unclear if this was by a researcher or because dietary rules changed so rapidly in the early years.
[441] Johnston 1985: 70–71.
[442] *Ibid*: 207.
[443] Priestley 1999: 151.
[444] Tomlinson 1978: 15.

severity' that prisoners' condition 'ought not to be made more eligible than that of the poorest class of subjects in a state of innocence and liberty'."[445] From a health perspective, this was, of course, problematic: given the often squalid conditions that the working poor lived in, how could the pauper or criminal survive on less? "Excessive" diet was justified by some because of hard labour. After all, "if criminals are to be severely punished by any method they must be sustained. When heavy inflictions are laid upon them, and the support which the body requires is withheld, their health will in many cases be impaired, and the consequences will be as costly as the treatment would be inhumane."[446]

The key foodstuffs of convict diet were debated and justified from the 1840s using nutritional science, economics and elements of the less-eligibility principle, although it had to be watered down. It was felt that it was important that prisoners should not cost the state too much money. In practice by the 1860s the less-eligibility principle had to be more or less dropped in prisons.[447] It was acknowledged it was not possible to keep a man alive doing hard labour on less food than consumed in the workhouse, but it was still argued prisoners should not receive "luxuries" unavailable to the working poor. The ending of the less-eligibility principle was justified on a number of grounds, including the impossibility of comparing those on the outside who consumed alcohol or drugs with abstinent convicts, or the fact that the prison diet was, small in quantity, dull and unvaried.[448] The end of the less-eligibility principle did not necessarily sit well with the press or the public, even if authorities felt it was an unsustainable policy.

Pentonville staff were not the only people experimenting with prisoners, although it was the official testing ground for penal policy. Medical men, philanthropists, Quakers and journalists, amongst others, weighed in with opinions on the prison system. One character who is of particular interest to this thesis is Edward Smith (1819–74) a physician and physiologist. Smith was interested in nutrition in institutions and was appointed by the British Association for the Association of Science (BAAS) to look into prison diet, resulting in a report as part of the Select Committee on Prison Discipline in 1863. He was concerned about the discrepancies between local and government prisons and argued that prison diet was "based upon wrong principles, and unjust details."[449] In his report he entered into debate with PMOs such as William Guy and Lawrence Bradley to claim

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[445] Wiener 1995: 45-46.
[446] Burt: 1852: 158.
[447] Select Committee on Prison Discipline 1863*:* 355.
[448] Tomlinson 1978: 16; Webb and Webb 1922: 220–221.
[449] Anon 1859a. 429.

authority over prison diet.[450] His appointment followed experiments on convicts at Coldbath Fields and at the Wakefield House of Correction, carried out on his own initiative. He was also appointed to look into the hardships of Lancashire cotton-mill workers in 1863, having completed his prison assignment.[451]

Smith was concerned that the treadmill was excessive labour for an individual who was not receiving sufficient nutrition. Building on the work of chemists like William Prout and Justus von Liebig, Smith invented a face mask to measure the amount of carbon-dioxide and moisture that was breathed out when performing different tasks and collected urine samples on both "rest" and "work" days.[452] He worked the treadmill himself as well as taking urine samples from convicts. He found that carbon dioxide outputs greatly increased on the treadmill.[453] Whereas changes in nitrogen excretion were not statistically significant.[454] Consequently, Smith thought the production of carbon dioxide was the best measure "of the vital functions attending muscular exertion."[455] Using these two data sources compared to the amount of food that was consumed Smith calculated how much carbon was needed for certain tasks, specifically hard labour in the case of the convicts.[456] "Both sets of measurements were used to advance knowledge of the fuels used by muscles and their efficiency."[457]

Smith's observations were used by Adolf Flick and Johannes Wislicenus to show that chemical energy consumed in food was not equal to mechanical energy exerted by the body. They found the amount of nitrogen in urine showed the protein they consumed during a mountain climb had not been fully broken down so could not have provided the energy for the hike. Flick, Wislicenus, and Smith provided important evidence indicating the error in and simplistic nature of Liebig's dogma that physical work involved the

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[450] Anne Hardy (1995) gives a detailed account of Guy's career in Millbank, his later role as an independent expert on prison medicine and his views on prison diet. For Hardy Guy sometimes prioritised his views on prison discipline and the necessary harshness of punishment over his medical responsibilities and advise he received from other medical men.

[451] See *ODNB* "Smith, Edward".

[452] Carpenter 2003: 642; William Prout (1785–1850) a British chemist had identified a classificatory system for foodstuffs; oleaginous materials (fats), saccharinous substances (carbohydrates), and albuminous or nitrogenous matter (proteins) which led him to speculate that through chemical transformations the body was fuelled by food. This underpinned the work of "father of organic chemistry" Justus von Liebig (1803–73) and, nineteenth century nutritional research as well as prison dietaries. Porter 1997: 322.

[453] Smith 1859b: 692, 709–711.

[454] Carpenter 1994: 64.

[455] Smith 1862 quoted in Carpenter 1994: 64.

[456] Tomlinson 1978: 20; See Select Committee on Prison Discipline. *PP.* 1863: 127.

[457] Carpenter 2003: 642.

destruction of protein, and that working men had very high protein requirements.[458] This knowledge could be fed back into prison diets.

A review in the *BMJ* observed that Smith focused on the government (i.e. Pentonville) dietary scheme, which was adopted in convict prisons but were optional in county prisons. The government scheme was "based on wrong principles", according to Smith. By carrying out a series of experiments Smith convinced the reviewer that it was possible to subscribe "the true amount of food required under different circumstances."[459] By experimenting on prisoners, Smith was able to ascertain how much carbon and how much nitrogen was lost during a day in prison doing hard labour (8 ounces of carbon, 200 grains of nitrogen, hydrogen was yet to be tested). Based on this, Smith made dietary recommendations which he, and the reviewer, believed would be better for the body and cheaper for the prisons (as convicts were being over fed, particularly in summer).[460] He was very concerned about the inconsistencies between work done and nutrition.[461] Smith argued that prisoners who were fed a diet so high in carbohydrates would not be able to perform hard labour, and would therefore be more likely to resort to crime upon their release.[462] This was significant. As Ian Miller argues, "from the late eighteenth century, medical scientists began to analyse and comprehend food in new ways. Food played a powerful role in structuring institutional experiences…"[463] William Guy, Baly's successor at Millbank, tested Smith's conclusions and although he agreed with some of the claims, he reportedly obtained different results when performing similar tests on middle-aged men.[464] If it was not possible to corroborate the results Guy felt they were not significant to impact on prison diets.

Smith's analysis was not only confined to analysing the effect that the prison diet had in relation to exercise, but was interested in its influence over convicts more widely. He argued that dietary plans should change depending on the term of imprisonment, but he proposed consistency in some major respects. Smith, in contrast to Guy, thought there should be consistency in prison diet over the sentence term, and he believed that the quantity of food should be constant throughout each day. Thus, breakfast should be the

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[458] See Carpenter 1994: 62–75.
[459] Anon 1859a: 429–430.
[460] *Ibid*: 429–430.
[461] Smith 1859: 284.
[462] Smith 1957.
[463] Miller 2015: 200.
[464] See Hardy 1995 for more on William Guy; Papers Relating to Prison Dietary 1864: 602–604.

same size as dinner, and if meat were offered some days, it should be offered on all.[465] Guy disagreed with this, arguing for a "progressive diet" in which the amount and quality of food improved with time, in line with the class and mark systems.[466] Furthermore, Guy argued that meat was not especially necessary to prison diet. Enough nutrition could be gained from starchy food and vegetables. Sapiro suggests that "mainstream Victorian Medicine insisted on the enfeebling and even fatal effects of a meatless diet and alleged that a meatless diet could undermine imperial advances by demoting (British) man from his perch atop the natural order."[467] If this is the case then having some meat free days acted as a social as well as economical marker that the convict was at the bottom of society. Furthermore, not having meat everyday would save money and follow the principle that convicts should not have more than honest people. It probably also had religious connotations, purging the body and mind like a fast, thus encouraging reform.

Meat was not the only aspect of the diet debated by medical men. Potatoes, by contract, were never taken out of the prison diet, and were perhaps the least controversial foodstuff given to prisoners. They were an important feature of Bentham's diet plans for prisons. He saw potatoes as a much better choice than bread as they could be cheaply grown in prison grounds and did not require the level of manufacturing that bread did. He also felt that potatoes were more nutritious than bread.[468] This was supported by the assertion that the Irish diet was predominantly potato based. Although their diet was plain and often small in quantity one would not, argued Bentham, describe the Irish as a "puny race".[469] Guy had more scientific justifications for the continued consumption of large amounts of potato. He wrote "the potato contains a vegetable acid, either the acid of lemons or tartaric acid, it is not quite made out which; there is some little difference of opinion as to what the precise acid is, but it is a vegetable acid in combination with potash; whenever that is wholly absent from the food, scurvy will breakout, whatever the dietary may be otherwise; and whenever that is supplied, scurvy will be cured."[470] Illustrating the importance of food in general health as well as being able to perform hard labour, this work built on Baly's

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[465] Smith 1857: 293–306.
[466] Select Committee of the House of Lords on Prison discipline 1863: 498.
[467] Sapiro 2008: 161.
[468] Henderson *et al.* 2015: 16–17.
[469] *Ibid*: 17.
[470] Carnarvon Committee 1863: 359.

1843 research which showed that military prisoners who did not have potatoes in their diet got scurvy, whereas convict prisoners who ate potatoes did not.[471]

Guy also recommended that cocoa be kept in the diet, on nutritional grounds. The drink was made of cacao flakes, milk, molasses, and water, and was served at most meals. Guy said, "it is a very good article of diet, and contains a good deal of that oily element which, if we could manage it, should always exist in food."[472] Guy's suggestions to keep cacao and molasses in the diet was probably built on the work of Francois Magendie, a French surgeon and physiologist, who in the 1810s experimented on dogs. He took away food groups to see the effects on the animals. He found that, contra to popular belief, dogs could live for fifty days on bread alone, and began to lose weight after two weeks on a no sugar diet. Showing nutritionists that sugar was important part of diets. Experiments like this led to thousands of "balance trials".[473]

Bread was more controversial. This was the food stuff of the nation and the quantity of consumption was the biggest indicator of class, and a common point of comparison between the workhouse and the prisons. This central component of prison diet was a source of disagreement for Guy and Smith. Guy argued for brown bread in prisons as it contained more nitrogen, Smith argued for white as he thought brown went to the bowls too quickly so was wasteful.[474] Guy seems to have won this battle, supported by the writings of MP Sir James Graham, who had argued in 1843 that in local prisons pure water and brown bread encouraged a "fair state of health" and "none of the diseases which are commonly attributed to insufficient or improper diet."[475] Some PMOs, however, prescribed white bread to the sick.[476] Whether Guy won because of his arguments or his position as a PMO is unclear. The volume of bread consumed was immense, Mayhew and Binny observed having visited the bake-house at Pentonville (Figure 2.14) in 1862 that the ten ounces of breakfast bread (which was flat as they could not leave a sponge overnight) and the cacao (which was ground by a steam engine on site and made with water from an "artisan well" rather than the Thames) was unadulterated, unlike the outside

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[471] Baly 1843.
[472] Carnarvon Committee 1863: 360.
[473] Carpenter 2003: 639, 640.
[474] Tomlinson 1978: 21; See Select Committee on Prison Discipline 1863: 125, 387.
[475] Convict prison dietaries &c. 1864: 3.
[476] Priestley 1999: 170.

world. They asked: did you have to be in prison to get clean food?[477] Once again, inconsistencies between convicts and the working poor were apparent.

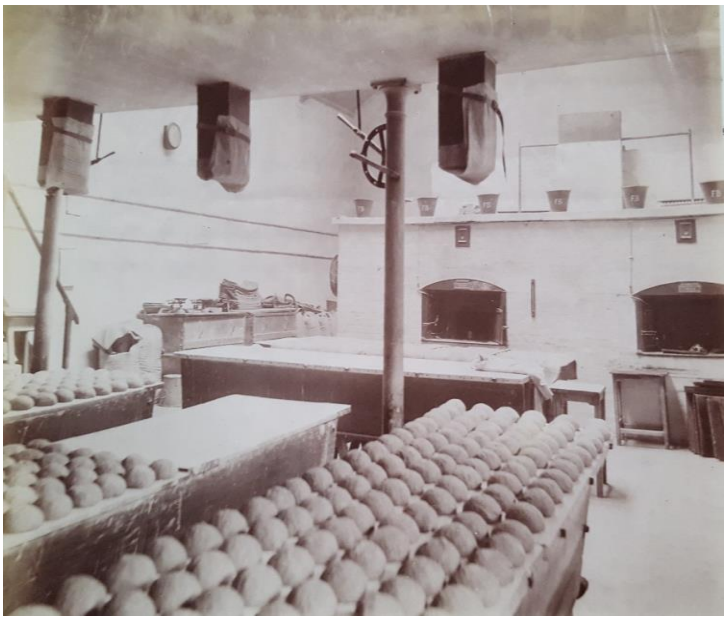

Figure 2.14 Interior of the bakery at Pentonville

Date Unknown TNA.COPY1/420/178

By the 1860s the prison dietary plan was mostly confirmed, and, as in 1844 it featured a lot of bread and potatoes.[478] Breakfast was bread and cocoa. At lunch, there was half a pint of "good soup" plus four ounces of meat a day (beef or mutton), five ounces of bread, and one ounce of potato. Supper was a pint of gruel made with an ounce and a half of meal and sweetened with six drachms of molasses, accompanied by five ounces of bread. This made a total of twenty ounces of bread a day per person.[479] Those in the infirmary could have extra food by order of the doctor, including eggs and butter. But when on punishment diet a convict was limited to sixteen ounces of bread a day plus water. Normally a punishment diet only lasted for three days, but possibly could continue up to twenty-eight. The Pentonville cook was quoted as saying "just dock a prisoner's food, and it hurts him more than any 'cat' [whip] that could be laid across his back."[480] This is something else

[477] Mayhew and Binny 1862: 130.
[478] Throughout food was sourced locally or grown on site. Adverts were placed in the papers for suppliers see Anon 1875c: 2 for example.
[479] Mayhew and Binny 1862: 130.
[480] *Ibid*: 132.

Guy and Smith disagreed on. Smith saw this as starvation, Guy did not.[481] If the punishment was over twenty-eight days then they got full rations every fourth day, so they did not lose too much weight. It was noted that over three days a man could lose four or five pounds of weight but tended to regain it when on full rations. The wardens believed the temperament of the man dictated how much weight he lost — "fretters" lost more.[482] Records were kept of those under the bread and water punishment but again none of these books have survived.

When Jebb died in 1863, the prison policy came under review by the new Director of Convict Prisons, Lieutenant Colonel Edmund Henderson. The Carnarvon Committee, a Select Committee of the House of Lords, recommended that prisons focus on punishment rather than reform and this meant harsher prison life. Henderson voiced no objection to plans to implement tougher punishments and removal of luxuries, including beer and flock beds.[483] Many of their recommendations were incorporated into the Penal Servitude Act of 1864. Although the committee felt on principle that prison dietary allocations were too generous, they did not feel they had the expertise to recommend a reduction in food, so they suggested a second, scientific committee be appointed to investigate. The *Lancet* was "outraged" that this committee was "consistent not of 'scientific persons of experience, accustomed to physiological experiment'" like William Sharpey, Edward Smith or Henry Acland, but of three PMOs: William Guy, Vans Christian Clarke (newly appointed at Dartmoor after an exciting naval career), and Dr Maitland (Gosport Military Prison).[484] It should be noted that despite the *Lancet's* claims, the science of human nutrition was decidedly in its infancy at this time.[485] This outrage is symptomatic of the increasingly hidden nature of the prisons which annoyed the public, and also the view held by a minority that the PMO was a civil servant rather than a straight forward part of the medical community. However, when commenting on a second report by PMOs William Guy, Lawrence Bradley and James Rendle, which we will turn to momentarily, the *Lancet* reported "it will be evident that no better selection of members could have been made", despite these also being PMOs and only a few months having elapsed in between.[486]

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[481] Hardy 1995: 64.
[482] Mayhew and Binny 1862: 131–2.
[483] Johnston 1985: 87.
[484] Hardy 1995: 64.
[485] *Ibid*: 64.
[486] Anon 1868b: 597.

The Carnarvon Committee put forward its report as part of the Royal Commission of Penal Servitude. The recommendations were designed to prevent scurvy, scrofula, tuberculosis, and to be adapted depending on the labour or physical requirements on the individual.[487] Guy and his committees of PMOs encouraged the reduction of food in 1863, arguing that the criticisms of Millbank were wrong; disease not diet caused scurvy, dysentery and death in 1822. Guy thought the Pentonville experimental diet was excessive.[488] After problems at Millbank in 1822 Latham and Roget had "experimented" to quantify how much food/liquid prisoners needed, but Guy thought they had got it wrong.[489] Guy justified his position in a pamphlet; "my apparent indifference to suffering is that of the surgeon who performs a painful operation, that he may save the life of the patient."[490] In the same way he believed hard labour and a meagre diet punished but improved the individual through pain. Hardy has argued that "William Guy was one of the rare prison PMOs who rated society's requirements for punishment and discipline above convict health."[491] The committee sought sufficient nutrition without being seen as pampering or reducing the disciplinary effects of prisons.[492] They were seen to have got it right by the prison directors. The scientific expertise of those on the committees in the 1860s was taken at face value. McConville argues that most of the people involved prioritised punishment, as such "conclusions and recommendations inevitably and conveniently overlooked some important factors".[493] More charitably, Webb and Webb argued in 1922, "Common sense seemed to dictate to them that the amount of food given should have some relation to the labour under-gone, and that the natural stimulus offered by having an object to work for would act beneficially on the prisoner in a sanitary as well as in an industrial point of view."[494]

In 1864, the second branch of the Select Committee, also consisting of PMOs, was appointed. Guy, Bradley and Rendle contributed to the report which was then submitted by Edmund Henderson (Chairman of the Board of Directors of Convict Prisons) to Whitehall. Guy, Bradley and Rendle were charged with presenting a report that was "founded on experience, both scientific and practical", and to find a diet suitable for

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[487] Hardy 1995: 65.
[488] Johnston 1985: 88.
[489] Sim 1990: 18.
[490] Guy 1846: 144–145.
[491] Hardy 1995: 76.
[492] Sim 1990: 34–35.
[493] McConville 1998: 133.
[494] Webb and Webb 1922: 220.

Pentonville and Millbank that was "calculated to preserve inmate's health and with a capacity for every kind of labour now required of prisoners."[495] The report recommended a new diet plan, trialled at Pentonville, which would, they argued, be easily adopted in all convict prisons. They testified, "The issue of bread in one loaf daily, instead of three separate loaves, have for some time been in force at Pentonville, and has been found economical and beneficial, and its general adoption seems desirable".[496] Whilst experimenting to find the appropriate prison diet the committee had "disastrously" experimented with increased liquid foods (specifically soup).[497] They do not specify quite what disastrous consequences came about, but following this experiment they decided to draw on the advice of Dr Milner, the PMO in Wakefield, who advocate that there should be some reduction in the quantity of food, but advised proceeding with caution. He reminded the reader of mistakes made in Millbank (1822) and Wakefield (1859, 1862) when poor diet led to epidemic disease outbreaks.[498] Despite the warning it seems diet was reduced too much. Hardy has found that "in the convict prisons the 1864 dietary appears to have added complications to accident and surgical cases."[499] PMOs were (officially) no longer allowed to alter the official diet plan (except in Woking Invalid Prison).[500]

Agreeing with the recommendations made by Guy, Clarke and Maitland in 1863, it was reported that "the diet scale of Pentonville, which was decided on after careful experiment, and which,... suffices to the maintenance of health on the prisoner, consists of 280oz of solid food [like bread, meat, and potatoes] [...] the liquid articles of diet being in this case more nutritious, and the soup containing a quantity of meat which, if taken into account, would raise this diet also to about the standard 300oz."[501] The rations would be cut to 257oz for those doing light labour (see Figure 2.15) for the full proposed diet for convicts in separate confinement. This new Pentonville diet would apply to all convict prisons, apart from the invalid prison in Woking, and was intended to break the monotony of the diet and be healthy. In some cases these recommendations proved to be a substantial reduction in food. In Portland for example, men had been receiving 352oz of food a week.[502]

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[495] Reports of Committee to inquire into Dietaries of Convict Prisons 1864: 2.
[496] *Ibid*: 1.
[497] *Ibid*: 3.
[498] *Ibid*: 3.
[499] Hardy 1995: 66.
[500] *Ibid*: 65.
[501] Reports of Committee to inquire into Dietaries of Convict Prisons 1864: 11.
[502] *Ibid*: 9.

Enclosure 4, in No. I.

Proposed Dietaries for Convicts in Separate Confinement.

For Male Convicts at Industrial Employment.

Breakfast:

¾ pint cocoa, containing – { ½ oz. cocoa. 2 oz. milk. ½ oz. molasses.
Bread.

Dinner:

Sunday:
4 oz. cheese.
Bread.

Monday:
4 oz. hot mutton – { With its own liquor, flavoured with ½ oz. onions, and thickened with bread left on previous day.
1 lb. potatoes.
Bread.

Tuesday:
4 oz. hot beef.
1 lb. potatoes.
Bread.

Wednesday:
4 oz. hot mutton – { With its own liquor, flavoured with ½ oz. onions, and thickened as above.
1 lb. potatoes.
Bread.

Thursday:
1 lb. suet pudding, containing – { 1½ oz. suet. 8 oz. flour. 6½ oz. water.
1 lb. potatoes.
Bread.

Friday:
4 oz. hot beef – { With its own liquor, flavoured and thickened as above.
1 lb. potatoes.
Bread.

Saturday:
1 pint soup, containing – { 8 oz. shins of beef. 1 oz. pearl barley. 3 oz. fresh vegetables, including onions.
1 lb. potatoes.
Bread.

Supper:

1 pint gruel, containing – { 2 oz. oatmeal. ½ oz. molasses. 2 oz. milk.
Bread.

Bread, per week	148 oz.
Bread, per week-day	20 oz.
Bread, per Sunday	28 oz.

For Male Convicts not at Industrial Employment.

Breakfast:

¾ pint cocoa, containing – { ½ oz. cocoa. 2 oz. milk. ½ oz. molasses.
Bread.

Dinner:

Sunday:
4 oz. cheese.
Bread.

Monday:
4 oz. hot mutton – { With its own liquor, flavoured with ½ oz. onions, and thickened with bread left on previous day.
1 lb. potatoes.
Bread.

Tuesday:
4 oz. hot beef.
1 lb. potatoes.
Bread.

Wednesday:
4 oz. hot mutton – { With its own liquor, flavoured with ½ oz. onions, and thickened as above.
1 lb. potatoes.
Bread.

Thursday:
1 lb. suet pudding, containing – { 1½ oz. suet. 8 oz. flour. 6½ oz. water.
1 lb. potatoes.
Bread.

Friday:
4 oz. hot beef – { With its own liquor, flavoured and thickened as above.
1 lb. potatoes.
Bread.

Saturday:
1 pint soup, containing – { 8 oz. shins of beef. 1 oz. pearl barley. 3 oz. fresh vegetables, including onions.
1 lb. potatoes.
Bread.

Supper:

1 pint gruel, containing – { 2 oz. oatmeal. ½ oz. molasses. 2 oz. milk.
Bread.

Bread, per week	120 oz.
Bread, per week-day	16 oz.
Bread, per Sunday	24 oz.

Penal Class Diet. Males.

Breakfast:

1 pint porridge, containing – { 4 oz. oatmeal. ½ pint milk.
Bread.

Dinner:

1 lb. potatoes.
Bread.

Supper:

1 pint porridge, as at breakfast.
Bread.

Bread, per week	140 oz.
Bread, per day	20 oz.

Punishment Diet. Males.

1 lb. bread, per diem, with water.

Penal Class diet every fourth day when the diet is continued beyond three days.

Ordinary Diet. Females.

Breakfast:

¾ pint cocoa, containing – { ½ oz. cocoa. 2 oz. milk. ½ oz. molasses.
Bread.

Dinner:

Sunday:
3 oz. cheese.
Bread.

Monday:
3 oz. hot mutton – { With its own liquor, flavoured with ½ oz. onions, and thickened with bread left on previous day.
¾ lb. potatoes.
Bread.

Tuesday:
3 oz. hot beef.
¾ lb. potatoes.
Bread.

Wednesday:
3 oz. hot mutton – { With its own liquor, flavoured with ½ oz. onions, and thickened as above.
¾ lb. potatoes.
Bread.

Thursday:
¾ lb. suet pudding, containing – { Suet, 9 dr. Flour, 6 oz. Water, 4 oz. 7 dr.
¾ lb. potatoes.
Bread.

Friday:
3 oz. hot beef – { With its own liquor, flavoured and thickened as above.
¾ lb. potatoes.
Bread.

Saturday:
1 pint soup, containing – { 8 oz. shins of beef. 1 oz. pearl barley. 3 oz. fresh vegetables, including onions.
¾ lb. potatoes.
Bread.

Supper:

1 pint gruel, containing – { 2 oz. oatmeal. ½ oz. molasses. 2 oz. milk.
Bread.

Bread, per week	118 oz.
Bread, per week-day	16 oz.
Bread, per Sunday	22 oz.

Women employed in washing or other exceptionally hard work, to receive daily an extra allowance of 3 oz. bread and 1 oz. cheese, as an intermediate meal between breakfast and dinner, and 4 oz. of meat four times a week instead of 3 oz.

Penal Class Diet. Females.

Breakfast:

1 pint porridge containing – { 4 oz. oatmeal. ½ pint milk.
Bread.

Dinner:

1 lb. potatoes.
Bread.

Supper:

1 pint porridge, as at breakfast.

Bread, per week	112 oz.
Bread, per diem	16 oz.

Punishment Diet. Females.

1 lb. bread per diem, with water.

Penal Class diet every fourth day when the diet is continued beyond three days.

House of Commons Parliamentary Papers Online.
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Figure 2.15 Proposed dietaries for convicts in separate confinement

Reports of Committee to inquire into Dietaries of Convict Prisons 1864: 7.

The diet would vary slightly throughout the prison sentence, with less food at the beginning and slightly more towards the end in preparation for release or before moving to a public works prison. With this in mind it was recommended that the meat ration at Pentonville be reduced and the soup be switched to "nothing stronger than meat liquor flavoured with onions."[503] There would be some variety in the diet to prepare men for public works, including cheese (with bread but no potato), more milk and suet pudding.[504] Exact weights of foods would depend on the labour being performed and for how long, for example oakum picking required less food than the crank.[505] Guy equated the amount of food to the amount of work and firmly believed that no work meant no food.[506] The reduction in quantity, reflective of Guy's loathing of what he called "soup kitchen philanthropy" and waste. He believed in economy and social justice.[507]

It should be noted that the committees' recommendations focused on male convicts, but it was suggested, slightly as an afterthought, that women would receive ¾ of the men's allowance, but got extra if they worked in the laundry.[508] This was another point of disagreement between Guy and Smith. Smith believed women needed one tenth less food than men.[509] It was also suggested by committee that all boys under eighteen and men over sixty-five received the light labour diet.[510] It is unclear if they expected these people to be doing light labour or if age dictated how much food an individual needed. The dietary plans once again assumed a young, healthy adult male, others presented challenges to the quest for conformity and standardisation.

The 1864 diet continued to be used in most convict prisons until 1898 with small variations.[511] Diet remained an issue for PMOs and those commenting in the medical journals. Edwin Lankaster, the coroner for Central Middlesex, wrote in 1867 that "modern chemical and physiological research has placed within our reach the means of arriving at a tolerably accurate estimate of the nature of the constituents of food which ought to be supplied to human beings for the healthy nourishment of their bodies."[512] With this in

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[503] *Ibid*: 4.
[504] *Ibid*: 4.
[505] *Ibid*: 5.
[506] Hardy 1995: 63.
[507] *Ibid*: 63.
[508] Reports of Committee to inquire into Dietaries of Convict Prisons 1864: 5.
[509] Tomlinson 1978: 20.
[510] Reports of Committee to inquire into Dietaries of Convict Prisons 1864: 13.
[511] For example Chatham introduced extra meat and slightly thickened the soup because of the nature of the labour there. Johnston 1985: 214.
[512] Lankaster 1867: 280–281.

mind Lankester believed it was possible to find the universally ideal diet for those inside national institutions such as the prison or the workhouse. Furthermore, he argued that the withdrawal of food could not be used as punishment.[513] A review of prison diet was called in 1872. Having retired from Millbank in 1865 to take up a professorship at Kings College, William Guy was appointed as an independent advisor to lead the investigation. Having created the dietary plan in the first place, he was of course not inclined to see flaws in it![514]

The expertise of the PMOs, and particularly William Guy, can be seen in prison diet planning. Tested at Pentonville, overseen by Bradley, Rees, and the Committees, the convict prison dietaries were approved by the HO. They drew on knowledge from within the prison, which was in turn informed by general science but also philosophies of punishment. In 1868 the *Lancet* reported "it may be well to call attention to the fact that the dieting of prisoners has formed a subject of much thought and investigation on the part of the public authorities, and that from time to time modifications in the diet of prisoners have been introduced by the advice of the medical officers of the prisons."[515] Discussions about diet were a space where PMOs could assert their authority and influence penal policy including punishment. Pentonville was used as a space to trial the new dietary experiments. Health and punishment needed to be balanced within the prison, but also against other social institutions like the workhouse. How much food a person needed, and the nutritional benefits of different diets, were explored in the prison context and impacted on the new emerging research into food science.

V. Conclusion: Controlling the Body and Affecting the Mind

"We feel warranted in expressing our firm conviction that the moral results of the discipline have been most encouraging, and attended with success which we believe is without parallel in the history of prison discipline", reported the Carnarvon Committee in 1863.[516] By focusing on Pentonville as the model prison, it is possible to see how diet, punishment, labour, exercise, hygiene, and architecture came to be developed through experimental methods. The convict prisons were influenced not only by desire to punish but also by the necessity to maintain health and reduce interventionist medicine. Prison

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[513] *Ibid*: 280–281.
[514] Hardy 1995: 67; RDCP for 1872: 8–9.
[515] Anon 1868b: 597.
[516] Report of the Select Committee of the House of Lords on Prison Discipline 1863.

medicine at Pentonville became more than merely the avoidance of disease: it involved the management of ventilation, diet, clothing, exercise, labour, and punishment which would provide the model for subsequent prisons. By invoking the language of science, the prison system gained an air of legitimacy and the men managing it gained authority. In 1852, John Burt lamented that so many different penal-reform systems had been tested: hanging, transportation, hard labour as well as silent, solitary, and separate confinement had, in his eyes all been "taken up and thrown down with astonishing rapidity."[517] As Burt saw it, the "model prison" was built to experiment with the prevention of "the dangers of associating criminals", which, as discussed in the introduction to this thesis, was seen as encouraging immoral behaviour and criminality as a contagion.[518] Pentonville originally employed the separate system to combat association and encourage reform, but this was relaxed to what became known as the mixed system. The separate system should have created "perfect regulation" rather than "one contaminating mass".[519] It was considered necessary to compromise the system to keep bodily health, mental health, and productivity high.

From 1842, the challenge was to find the balance between providing sufficient nutrition to support hard labour, but not so much as to insult the working poor. Plain simple food was served throughout the period, justified using the science of the day. PMOs were able in this field to come out as an authority on diet. As Sim has argued: "under the banner of medical science, then, the quantification of punishment via experimentation in dietary provision and work-load allowed doctors to articulate their views and make interventions into the increasingly intense debate about the nature of the prison regime."[520] Unofficially, the PMOs set, for state and charitable institutions, the baseline for how much food an individual needed to survive. Theoretically the convict should have had this minimum, with the workhouse paupers having a little more and the working poor a little more than that. In reality it has been suggested that convicts had more food because the baseline was set for adult men performing immense physical labour. Nevertheless, very few convicts who wrote about their experiences in prison praised the food.[521]

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[517] Burt 1853: 487.
[518] *Ibid*: 488.
[519] Tartt 1859: 35.
[520] Sim 1990: 29.
[521] Henderson 1869; One-who-endured-it 1877; Ticket-of-leave-man 1879; Fletcher 1884; Bidwell 1888; Balfour 1901.

From the beginning, separate confinement and physical punishments in prisons were considered a risky strategy; the potential damage to mental health was immediately identified. Research was done into the effects of labour and confinement on the body with Pentonville once again being Jebb's experimental ground. Balancing prison philosophy with health proved challenging, particularly at Pentonville which put the body and mind through forms of physical labour and isolation which were previously untested. This chapter has focused on the body, but Pentonville showed prison officials that there were different bodies amongst the criminal population, and also different minds. As one study has shown "Within weeks of its opening, Pentonville was racked by alarming cases of mental breakdown, delusions, hallucinations, panic, depression, anxiety and morbid feelings, according to medical staff and chaplains. Prisoners declared that they were visited by the spirits of the dead, that they were being poisoned, that there were snakes coiled around the bars of their cells and that things crawled out of the ventilation system. The chaplains and medical officers were preoccupied on a daily basis with attempts to subdue and calm prisoners' intent on violence, suicide, or self-harm. Official reports, with some reluctance, confirmed the relationship between high levels of mental disease and the rigor with which the separate system was implemented."[522]

In 1850 it was reported that "however beneficial confinement in such places may really prove to the bodily health of the inmates, it sometimes appears to produce an opposite effect upon their mental condition; particularly in those undergoing solitary or separate punishment."[523] Between 1840 and 1850 it was reported that from Pentonville and Millbank, sixty-one prisoners were sent to Bethlehem Hospital (forty-seven men, and fourteen women) plus four men who came from the hulks, but had previously resided in Pentonville.[524] The risk of insanity, lunacy or weakmindedness in prisons became so prevalent that two new institutions, that the Woking Invalid Prison and Broadmoor Criminal Lunatic Asylum had to be built to manage the problem as will be discussed in chapter 3.

The Pentonville experiment threw up new challenges for PMOs, particularly in relation to the everyday management and punishment of convicts. The system was meant to create uniform punishment for all who passed through the gates but what it showed was that people responded differently. The experiment was focused around seemingly healthy

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[522] Charleroy and Marland 2016: 142–143.
[523] Webster 1850: 1122.
[524] *Ibid:* 1122.

young men, but many fell ill, complained of hunger, or showed signs of madness. While on the one hand the system continued to be seen as the model for all other convict prisons, it was increasingly recognised that such a plan was unworkable, and that adaptations had to be made in relation to the differences between different kinds of prisoners. Nevertheless, to the prison authorities Pentonville was widely seen as a model prison. It was the implementation a new plan that was meant to be a national plan. As it transpired there were still problems with the Pentonville model. Many of which were solved to Jebb's satisfaction in Pentonville, but then had to be re-solved in other institutions. Pentonville prison was widely emulated, but it was seen to have some deficiencies which led to internal modifications to the management and day to day running of the prison. The main problem with Pentonville though was its limitations in relation to particular groups of prisoners and seeming inability to adapt to groups who were minorities in the prison system, in particular women and the sick. This led to the development of specialist prisons which were variations on the Pentonville model.

By 1850 the convict service was made up of a range of places of confinement. Millbank and Pentonville were used completely for separate confinement, managed on the Pentonville model. Wakefield, Preston, Leeds, Leicester, Northampton, Reading, Bath, and Bedford had some cells for separate confinement within the local prisons. The government cells were run like Pentonville as far as the architecture of the buildings would allow. Portland and Dartmoor were public works prisons, these were for convicts that had been through Millbank or Pentonville and now did work for the state (such as building roads) as part of their sentence. The prisons were like Pentonville but allowed more association and trade-led education. Restricted space in convict prisons meant that some convicts still went to the hulks at Woolwich or Portsmouth, these ships had to adapt the Pentonville model, the close living quarters meant the separate system was severely diluted. In addition to these spaces for healthy (predominantly male) adults, juveniles were sent to Parkhurst on the Isle of Wight. Female convicts were in separate wards to the men and in 1853 the first all-women's prison opened in Brixton, which was an adaptation of Pentonville specifically for women. It was also found that "invalids" (physically or mentally ill convicts) could not perform hard labour or cope with the separate system. They went to Shorncliffe Barracks or to the Hulk "Defence" also at Woolwich, until the 1860s when Woking Invalid Prison opened.[525] These spaces were a diluted form of the

[525] Thomas 1972: 16.

separate system. Pentonville was meant to be the model prison and the final experiment in convict prisons, as subsequent chapters show concerns about convicts' health lead to the development of new types of convict institutions.

Chapter 3.
Mental Illness and Categorising Criminals: Woking Invalid Prison 1860–1886

> *If it is objected that those are criminal lunatics, and not ordinary lunatics, the obvious answer is that we insist on sending criminal lunatics from local prisons to ordinary lunatic asylums, because they are not indistinguishable from ordinary lunatics and are to be treated as such, not as prisoners.*[526]

I. Introduction: Concerns about Criminals' Minds

Woking Invalid Prison was built as a response to growing worries about how to punish an individual when their body or mind was already damaged, and the debate over the morality of punishing the insane through hard labour. As previously discussed, prison philosophy focused on hard labour, separation, and reform. Questions then had to be asked: how can a physically ill person be expected to do hard labour? Would an insane individual understand the moral lessons being taught?[527] Was it medically acceptable to keep an insane individual in the separate system? Woking Prison opened in 1859 to care for criminal invalids who were physically disabled and convicts who were not found to be insane at their trial but were later diagnosed as being insane or weak-minded (but not so severely that they were moved to Broadmoor Criminal Lunatic Asylum).[528] This chapter

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[526] TNA.HO45/9525/32338 "Lunacy: Report on Accommodation at Broadmoor Asylum and the Question of Removing Lunatic Convicts from Woking" Hereafter: *LRAB.* 22 April 1885: 19 (Punctuation added).

[527] Many thought punishment would still act as a deterrent for the insane individual discouraging them from committing further crimes. Some, like Queen Victoria, believed the punishment of the insane, up to and including hanging, would also discourage other insane individuals from committing crimes. Stevens 2015; Walker 1968: 189.

[528] To be found insane in court the crime needed to be series enough for the trial to be held in a higher court. If it was a lesser crime a psychiatric diagnosis could not be made until the convict came into contact with a prison doctor. Saunders 1983: 234.

focuses on insane criminals.[529] As we shall see, the PMOs' struggled to define, categorise, understand and treat forms of lunacy and it was unclear how to balance medical or psychiatric care with punishment. In the nineteenth century there was an increase in diagnoses of mental illness in both men and women in courts and in prisons. In most histories of prisons Woking was just another convict prison, albeit one with an invalided population. It has commonly been used as an example to illustrate general points about prison practices and the PMO John Campbell is often quoted, being one of the few to write a book about his experiences. However, as this chapter shows Woking was not the same as other convict prisons, its architecture, management and approaches to punishment and medicine had to change from the Pentonville model. A new prison experiment had to be started, and it differed from the intended prison standard even more than building a "feminine" and less strict all-female prison at Brixton had done in the 1850s. These new types on convict prisons called into question why the prisons seemed ineffectual but also PMOs wanted to know what defined criminals. The construction of Woking furthered debates which had started in the 1850s about how criminality and insanity were linked. This chapter shows how that discourse continued and manifested itself in a new prison experiment from the 1860s to the 1880s.

This introduction outlines the emerging category of the "criminal lunatic" and the institutions associated with this new grouping. Criminal lunatic was a more flexible classification than the divides based on gender and physical illnesses seen so far in this thesis. Section II introduces Woking Invalid Prison, a unique site designed to punish and care for invalid convicts. It is argued that the architecture and organisation in this prison reflected the changing health and management policies relating to invalids. Section III discusses how criminal lunacy was understood, researched and treated at Woking. It highlights the challenges faced by doctors in distinguishing insanity from "weak-mindedness", or from criminality. It is argued that politically the criminal lunatic had two labels: "criminal" and "lunatic." It was unclear which should be prioritised: criminal and punishment or lunatic and health? Section V looks at the legal status of Woking Invalid Prison and argues that it was extremely confused. This section follows the scrutiny of the status of Woking's insane population in the 1870s and 1880s when it was uncertain if Woking was a prison or an asylum. Again, was it a place for punishment or health? This

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[529] For more on physical disabilities in prisons see Johnston and Turner 2017; Borsay 2002, 2005. For more on psychiatry and crime see Walker 1968; Smith 1981a, 1981b; Eigen 1995; Ward, 1996; Webb and Harris 1999; Robinson 2013.

chapter draws heavily on the memoir of John Campbell, the prison chaplain and papers and letters kept at the national archives which reveal the day to day management of Woking as well as the extended discussion through memoranda and official reports on how Woking should be managed, how it should differ or be similar to Broadmoor and other prisons, and when it was realised that Woking Prison was not working as intended the difficulties the various authorities had in reaching a conclusion.

Figure 3.1 Bethlem Hospital

1860. Science Museum, Date Unknown Image curtesy of the Wellcome Image Collection. (http://www.sciencemuseum.org.uk/broughttolife/techniques/bethlemroyalhospital. [Accessed 9/6/16])

So, to the problem of criminal lunatics. The need for somewhere specific to keep insane criminals was not new in the 1860s. It really began when James Hadfield attempted to shoot King George III in 1800. Hadfield's subsequent trial introduced the option to detain someone at His or Her Majesty's pleasure.[530] It was agreed that these individuals would go to Bethlem Royal Hospital (Figure 3.1) when it relocated in 1816 in order to have bigger premises and more open spaces. The government negotiated two wings at Bethlem which were to be put aside as the "State Criminal Lunatic Asylum". This was an unsatisfactory arrangement for both Bethlem and the Government, and Bethlem soon

[530] Stevens 2013: 5.

became over crowded which forced the government to buy small amounts of space in other asylums.[531]

By the 1830s the gaol and prison surgeons and general practitioners were becoming established parts of the legal system. Medical men appeared more frequently as legal and expert witnesses, particularly to account for the mental state of the accused.[532] At the start of the century most convicts were faced with the gallows, hulks, or colonies or possibly the pillory or branding iron. If found insane they went to gaol or were given over to the care of family.[533] Before 1845 the insane were cared for in a combination of gaols, houses of correction, workhouses, 16 country asylums and 136 private asylums, which were run variously as businesses, charitable foundations and private homes.[534] In 1842 the Metropolitan Commission of Lunacy carried out a major national inquiry into the care of lunatics, which led to the Lunacy Act of 1845.[535] The Lunacy Commission was formed to oversee the care of lunatics and later, it obliged boroughs and counties to provide asylums for paupers. These changes in law slowly made criminal lunatics government responsibility but not patients in the same way as the insane in the asylums. If the court found an individual to be insane they were sent to Bethlem or Fisherton House. Those who were "weak-minded" or "imbeciles" often remained in the prisons.[536]

In 1852, in an attempt to reorganise the invalid convicts, nearly six-hundred-and-thirty invalids were moved to Dartmoor which initially held fifty-percent invalided convicts and fifty-percent able-bodied convicts. Dartmoor then became solely an invalid prison until Woking opened.[537] Throughout this transition the hulks, including Stirling Castle Hulk at Portsmouth and the Defence at Woolwich, continued to hold invalids.[538] In response to the lack of space and apparent increase in both insanity and criminality in Britain it was decided in the late 1850s that Woking Invalid Prison and Broadmoor Lunatic Asylum (Figure 3.2) would be built. Woking opened officially in 1860 and Broadmoor in 1863, both were designed by Joshua Jebb in conjunction with the Home Office. A number of

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[531] Stevens 2013 5; Shepherd 2016: 474.
[532] Smith 1981b.
[533] Walker 1968: 84.
[534] McConville 1981: 339.
[535] Scull 1993:160-1.
[536] *Ibid*: 341.
[537] Brodie *et al.* 2002: 138.
[538] *Ibid*: 138.

studies have looked at Broadmoor, but Woking Invalid Prison has not been addressed in detail by historians.[539]

Figure 3.2 Broadmoor Criminal Lunatic Asylum

Date Unknown. Francis Frith Collection.
(http://www.victoriansociety.org.uk/news/broadmoor-hospital-berkshire/)

The criteria for establishing who went to Broadmoor and who went to Woking Prison were poorly defined. Generally, Broadmoor held those who were insane when they committed a crime or who were violent and disorderly so sent there from Millbank.[540] Predominantly there were two types of patient in Victorian Broadmoor: Queen's pleasure patients (individuals found insane when tried) and "time" patients, or insane convicts (criminals convicted of a crime and transferred to Broadmoor from prison after developing insanity whilst incarcerated).[541] Most of the patients at Broadmoor had committed crimes against

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[539] For example, Partridge 1953; Cohen 1981; Blom-Cooper 1995; Stevens 2013; Shepherd 2016.

[540] Campbell 1884: 84; TNA.HO8/174. *Quarterly Returns of Prisoners*. December 1876; TNA.HO8/192. *Quarterly Returns of Prisoners.* June 1872. From 1864 all criminals thought to be insane were first assessed at Millbank to insure they were not malingering or dangerous before being sent to Woking.

[541] Under nineteenth century criminal law judges were obliged to pass the pleasure sentence on anyone found innocent through insanity. Consequently the crime had to be serious enough to go to a higher court and had the effect that very few people charged with vagrancy or sending threats etc were sent to Broadmoor. Stevens 2013: 8. In many instances the defendant might have been found insane before the end of a trial and subsequently certified meaning a verdict was never announced by a judge, nevertheless by virtue of having been to court and found insane the individual was eligible for admittance to Broadmoor. Stevens 2013: 9. A very small number of patients were convicted murderers who were latter granted a pardon on the grounds of insanity so instead of being hung with served a life sentence in Broadmoor. Stevens 2013: 10. Also see Criminal Lunatic Asylums Act, 1860.

the person and found insane at trial or had gone insane in prison after being charged with theft or stealing.[542] Admissions to Broadmoor were strictly controlled by the HO.[543] All patients at Broadmoor had to be both "criminal" and "lunatic" to be admitted.[544] Woking Prison was for "convict" "invalids", both male and female, although there were some able-bodied inmates. In the prison system an invalid was someone who could not do standard hard-labour tasks. This may have been because of long-term physical illness, physical disabilities, mental illness or what are now termed learning difficulties.[545] This criterion included "lunatics" consequently there was not always a clear division as to who should be in Broadmoor and who in Woking. Woking took convicts who went insane in prison, were "weak-minded" or who were found to be insane during or after trial but not when they committed the crime. The majority of those in Woking were labelled as "weak-minded".[546] Not all mentally disordered prisoners in Woking were insane or certifiable, and this proved challenging legally and medically. In contrast all patients in Broadmoor were certified lunatics (although not certified criminals on the grounds of being found innocent on the grounds of insanity, they were nevertheless known to have committed a crime). The treatment provided at Broadmoor was explicitly more aligned with a county asylum than a convict prison despite the fact the patients had committed crimes. In Broadmoor the individual's status as an insane patient outweighed that as a criminal. In Woking the status of the convict/patient was less well define. Consequently, the legal structures put in place to protect and care for lunatics were often at odds with the philosophy of the convict prisons which enforced separation and punishment.

In Woking insane criminals were seen as "convicts" rather than "patients" and as such they were still expected to work and conform to usual convict practice during their sentence. Convicts with mental illnesses were often collectively called "criminal lunatics" or "insane criminals". "Criminally insane" was usually (but not exclusively) reserved for those who were deemed insane when they committed a crime. It was extensively debated whether the prison system caused insanity, as feared at Pentonville and Millbank, or if criminals were simply predisposed to insanity. The increasing incidents of insanity

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[542] Stevens 2013: 8; Shepherd 2016: 474.

[543] Blom-Cooper 1995: 157.

[544] Although pleasure patients and insane convicts were and are seen as different, they both fulfilled this criteria on paper even if not in title or treatment, see Shepherd 2016. It was not until the Mental Health Act of 1959 that non-offending patients could be admitted to Broadmoor. Blom-Cooper 1995: 158.

[545] More provisions were made for those with physical disabilities although all inmates were still expected to do hard labour.

[546] Campbell 1884: 77.

concerned the public, and prison officials were sensitive to accusations that their regimes caused madness.[547]

Histories of criminal lunacy generally follow two strands; during trial and after trial. Most frequently the focus is on the court room. It has been argued that the court room was where "madness" was invented and defined.[548] Famous cases like Daniel M'Naghten's trial in 1840 defined insanity in terms of responsibility and knowing right from wrong.[549] Medical authority over the insane was made official with the introduction of the M'Naghten Rules (often referred to as "the Rules") in 1843. They were *the* reference source for legal insanity pleas. The Rules asked lawyers to examine whether or not the defendant understood the nature of the crime and whether they understood right and wrong. If the defendant did indeed understand right and wrong they were not insane.[550] Knowing the difference between right and wrong remained the predominant test for insanity in legal situations throughout the nineteenth century, even with the increase of medical witnesses testifying for or against the sanity of the many accused, and a growing body of psychiatric literature. In the court room the battle for authority over knowledge about the mind was played out and "few observers could […] have predicted how difficult it would be for medical witnesses to justify their privileged voice in this category of disease."[551] It was not until the 1883 Trial of Lunatics Act was passed that there was the possibility of "guilty but insane" verdict. Prior to 1883 if a defendant was found insane they were also found not guilty. If the court found a defendant insane they could then be held at Her Majesty's pleasure in an asylum.[552]

There has been less work done by historians on insanity in criminals after trial. One example of a detailed history of insanity in criminals once they were in prison was undertaken by Janet Saunders in 1983. She showed that there was an intimate relationship between the prison, asylum and workhouse in the area and mapped the movement on

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[547] Priestley 1999: 180.

[548] Szasz 1961; Smith 1981; Eigen 1995; Golan 2004.

[549] Daniel M'Naghten [or McNaughten] attempted to shoot the Prime Minister, Sir Robert Peel, but instead killed his Secretary Edward Drummond, apparently acting under delusion. Smith argues it was usually cases of murder or attempted murder on an influential person which prompted legal changes in relation to insanity in court. 1981: 3.

[550] Wiener 1990: 88.

[551] Eigen 1995: 121.

[552] The number of criminals found insane either at the bar or in prison was rising in the nineteenth century. For example in the period 1854 to 1863 5.7% of murder cases in England were found unfit to plead and 10.1% were acquitted as insane. By 1874 to 1883 the number of unfit to plead had risen to 8.8% and acquittals on grounds of insanity rose 10.4%. Walker 1968: 86.

insane persons between these institutions.[553] Her study focused on Warwick and is an excellent example of how a local study can shed light on broader trends. Nevertheless, further work needs to be done on the relationships between, and comparisons of, prisons, asylums, and psychological and psychiatric studies. Saunders revealed that it was not until the 1913 Mental Deficient Act that proper provisions were put in place to treat insane individuals who came before the courts.[554] The question then has to be asked what was done before 1913, Saunders answers that in Warwickshire at least, insane persons who had not committed a crime which would be trialled before a high court had to go to prison to be diagnosed. Once their fate was in the hands of individual medial officers and governors, who had varying degrees of sympathy for those with mental illness.[555] The history of psychiatry is often written as a story based almost exclusively in asylums. Other institutions, like the prison, which were also concerned with insanity, have been neglected.[556] Woking Invalid Prison shows how difficult it was to define and treat insanity in criminals. Of course, it is already known that in asylums, doctors were attempting to categorise mental illnesses and this was also going on in prisons.

The criminal lunatic presented a different set of challenges for PMOs who were trying to understand and care for their patients: patients who were also convicts. The challenge of treating illness and punishing immorality was problematic. It became imperative for doctors to be able to make good judgements on the mental state of a patient so that they would be punished but also receive appropriate medical care. The tidy divisions between convict prisons, public works prisons, and local prisons which were being formed did not work for the insane criminals, who disrupted the system and did not obey rules regardless of the institution they were in. The challenge of managing the criminal lunatics and physical invalids in prisons was faced by PMO John Campbell who was appointed to Woking Invalid Prison when it opened. Woking Invalid Prison had a very short but complicated life and closed in 1886, only twenty-seven years after the first inmates walked through the doors. The next section introduces this prison.

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[553] Saunders 1983.
[554] *Ibid:* 220-221.
[555] *Ibid:* 223.
[556] For examples see Cohen and Scull 1985; Scull 1983; Wiener 1990.

II. Woking Invalid Prison: Building Solutions

Figure 3.3 Woking Invalid Prison after it had been converted into barracks

Date unknown (Post 1884), BBC Radio 4, 8 May 2008: "Making History"

Woking Invalid Convict Prison was built to hold insane and physically invalided convicts from England and Wales (Figure 3.3). Located in the Surrey countryside it removed invalid convicts from public view and was intended to reduce disruptions to the punitive process in other convict prisons or asylums. The prison was designed by Joshua Jebb and the architect Arthur Bloomfield, but was less like Pentonville (chapter 2) than other prisons, although it had many features of the standard convict prison architecture. Like all of Jebb's convict prisons, Woking displayed grandeur and dominance on the landscape, assisted by a hillside position and a 190-foot clock tower which could be seen for miles around, reminding the population to stay on the right side of the law. As discussed, the new prison at Woking was designed to be suitable for all invalids, with both physical and mental disabilities and illnesses along with some able-bodied convicts.[557] This section discusses the architectural and managerial decisions made at Woking, and introduces the

[557] In the early nineteenth century Surrey was a very rural county south of London, but because land around was cheap and under developed, it was a good place to build institutions (prisons, workhouses, asylums etc); By the 1890s institutions covered around 10% of the land in Woking. Proximity to London meant convicts, the insane and the poor could easily be moved to the county by railway. Crosby 2003: 93.

medical provisions and staff there. It shows that Woking had different healthcare provisions to other prisons, but followed the same policies where possible. Woking was a new type of convict prison, and a departure from the Pentonville model in that it did not enforce the separate system or have some of the characteristic architectural features such as a pin-wheel of wards around a central chapel.

Prisoners were brought to Woking from Lewes, Carisbrooke and Dartmoor from 1859, although the official opening was not until 22 March 1860.[558] After the official opening all invalids incapable of working, or in need of constant medical care, were moved to the prison. There they were overseen by PMO John Campbell (c.1815–1900) who spent thirty years working for the PMS from 1850 to 1880.[559] He published his book "*Thirty Years' Service of a Medical Officer in the English Convict Service*" in 1884. He was the chief PMO at Woking Prison from 1860 to 1880, after which he wrote his memoir. His book takes the reader through his time on convict ships, Dartmoor Prison, Woolwich Hulks and Woking Invalid Prison. Campbell's concerns and attitudes reflected the broader trends in opinion expressed in medical journals at the time in relation to the treatment and heath provisions for criminals. Although being typical in many ways Campbell was in a unique position as the chief PMO in Britain's only invalid prison. Campbell's book is often used by prison historians in a passing fashion. Quotes are lifted which suggest cruelty or power struggles in keeping with Foucauldian ideas on prison organisation, but a closer reading gives insight into prison medicine. Campbell held a lot of views which were shared by other prison staff, and many asylum doctors. Campbell's focus was not research or publishing, although his assistants did engage in this kind of work. He admired the convict system, but his book is sometimes reads with an apologetic undertone, acknowledging some of the failings of the prisons and their staff to reform convicts.

Campbell began his career on a prison ship transporting convicts to Australia. He made one trip and spent a few months in a penal colony. Transportation was coming to an end in the early 1850s so his position as a medical officer on the transportation ships was short lived. He was appointed as the chief PMO of Dartmoor Convict Prison in 1852.[560] At the time, the prison held about twelve hundred convicts. This new position was a promotion, and his appointment was part of a recruitment drive for the PMS that was made necessary

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[558] Crosby 2003: 94. RDCP for 1859; RDCP for 1860.

[559] In that time he married Barbary. They had four children Patric, Elizabeth, Sinclair, and Margaret. 1861 Census.

[560] Dartmoor had been a prisoner of war camp which was renovated and made fit for habitation again under Jebb's initiative, opening as a convict prison in 1850.

by the expansion of convict prisons. He then oversaw medical care at the Hulks at Woolwich, and it seems that during this time it was decided that he would move to Woking when it opened. Consequently, in 1860 Campbell moved to the Invalid Prison where he worked for the rest of his career.

Architecturally, Woking had some differences to other convict prisons as it was adapted for a new form of penal policy because of the convicts' health. Most significant was the hospital and space for the infirm. This hospital covered a much larger space and had more staff than was usual in a convict prison, having 162 beds in four large wards along with a dispensary.[561] "The basement floor, which was intended for the aged and crippled, was subdivided into rooms varying in size, for accommodation of from seven to twelve occupants, as to admit of good classification."[562] The hospital in Woking actively went against the building of the separate system into all government prisons. This was a serious digression from architectural and philosophical policy given that these people were expected to stay in the hospital wings for some time. Sickness or insanity made association necessary, not for healing but because the practical need for supervision meant separation was impossible.

The care system for the insane at Woking was a mixture of asylum "moral treatment" and prison management.[563] Like the asylums, prisons removed an individual from their everyday life so they could recover or reform. It is likely that the organisation of Woking was influenced by asylum trends in that fresh air and productive work were part of the healing process. Similarly, the strict discipline and silence of Pentonville was relaxed to some degree in accordance with general practice in asylums. This was of course problematic in that it was part of moral treatment to discourage solitary activity, whereas prisons were built around the separate system. Many psychiatrists including Henry Maudsley, William Bevan-Lewis, Désiré Mercier, and Thomas Clouston believed the insane were solitary, whereas the healthy man sought company.[564] Prisons did, however, have similarities to asylums in that they removed stimuluses to stress or excessive excitement, or indeed any excessive emotion. But Campbell and others thought this went

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[561] Campbell 1885: 47.

[562] *Ibid*: 46.

[563] At Broadmoor, for example, patients had a daily routine, they did exercise, were given an occupation, they ate fairly bland food and had plenty of fresh air. Although some stimulants were available it was this moral treatment which was expected to treat patients. Stevens 2013: 2-3. This is not dissimilar to the prisons were routine, an occupation, and exercise and diet were expected to help reform a criminal.

[564] *Ibid*: 83.

too far and resulted in patients and convicts falling into depression and stupors. The insane should be separated from other convicts but not necessarily from each other.

The hospital was run by prison staff, but some convicts were also employed on the wards. Campbell noted, with obvious surprise, that "there is one estimable trait in the character of prisoners, observable even among the roughest criminals—I mean the great attention and kindness they bestow on the sick…. And as the most hardened criminals are not exempt from this feeling, it has always led me to believe that even the worst criminals are not all together destitute of some good point that requires development."[565] Often the hospital was a place for recovery and bed rest, but also for isolation and occasionally for surgery. Campbell reported that "operations were occasionally required, and when [he] had occasion to amputate for disease of the large joints leading to complete destruction, the issue was as satisfactory as in the case of the minor operations, which were more frequent occurrence."[566] It is also likely that dentistry was needed in the hospital, but midwifery was not as pregnant women stayed at Brixton Prison or went to local asylums to have their babies.

In 1867 an adjunct to the prison was built as a female wing to further segregate men and women (see Figure 3.4). The separate female prison, which was for able-bodied and some disable-bodied women, opened in 1869, initially with seventy female inmates making a total 1,400 inmates in Woking by 1869.[567] The separation of men and women was important on moral and managerial grounds, the architecture therefore enforced morality, order and rules. Campbell supported the separation of men and women, but he did not always support the separate system, arguing it was potentially "injurious." The limited exercise and conversation encourage consumption, damage to respiratory organs, and depression (which impacted on general health). He did acknowledge, however, that it was advantageous to creating submissive discipline.[568] But when quoting his 1860 report he noted "I regret to say that my experience of invalid prisoners…is not such as to justify me in recommending the relaxation of discipline, where discipline can be safely carried out; in fact quite the reverse. For I have usually found invalids more unmanageable than the able-bodied."[569] He went on to say "… In several of the worst cases I was unable to certify

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[565] *Ibid*: 59.
[566] *Ibid*: 63.
[567] Crosby 2003: 94.
[568] Campbell 1884: 35.
[569] *Ibid*: 56–57.

them as fit for any kind of punishment, so that simple separation, and that for the safety of others, was the only means available."[570]

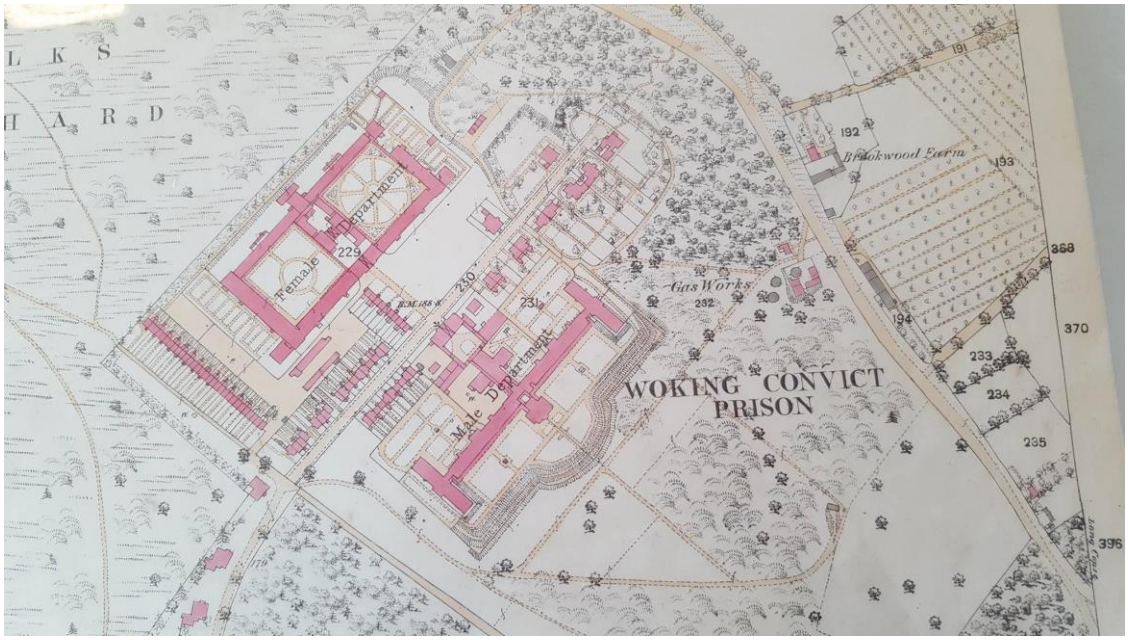

Figure 3.4 Map of Woking Invalid Prison

Ordinance Survey, 1871. XVI.11.

For Campbell, the separate system needed modification although did acknowledge the rational for it; "the separate system, when properly carried out…is an admirable arrangement; for it not only gives the prisoners time to reflect on their past misdeeds, but also inculcates habits of order and cleanliness."[571] Campbell described the separate system as being "in vogue" but he thought the damage caused to mind and body would impact not only health but also employment after prison and therefore potential to reform. He believed that the initial tests at Pentonville only worked because they were so well monitored and those imprisoned were only there for a short time, in "the prime of life", and free of hereditary diseases.[572]

Despite the concerns about making invalids work or subjecting them to the separate system, it was felt in the case of Woking that they were criminals as well as invalids, and their criminal status should have more emphasis than their mental or physical health. Men were primarily employed on the farm while women did cooking, cleaning, gardening or

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[570] *Ibid*: 58.
[571] *Ibid*: 112.
[572] *Ibid*: 110.

sewing mailbags, and prison clothes or uniforms for the boys at Greenwich hospital. Some inmates were employed in craft workshops, including making mosaic tiles and panels for churches, museums and St Pauls Cathedral.[573] In his general practice, Campbell believed fresh air was the best cure for most physical and mental illnesses. He felt penal servitude benefitted not only society, but criminals themselves by removing temptation and providing food, clothing and routine which they might not otherwise have had.[574] But for Campbell, "…it is painful to reflect that in so few recovery is possible, and that the wards are already so largely occupied by those who are hopelessly incurable."[575]

Although Woking was a unique convict prison, it still followed most of the standard regulations. Prisoners were subject to the usual reporting standards of the period including annual updates on health and behaviour.[576] As at Pentonville, the mark system was employed and the class to which a convict belonged dictated how much contact they could have with other people, as well as how much labour they had to do and of what difficulty. It also affected which diet plan an individual was on and how they could have their hair or facial hair. These were regulations to enforce uniformity and consistency during the sentence of penal servitude but towards the end of the sentence individual style could be expressed again so that upon release the convict did not stand out as an ex-con and therefore unemployable. As with other prisons a mark system was employed to reward and punish inmates, and it was generally considered successful.[577] In addition Campbell had a reward system of a little extra bread, access to pencils, paints etc., or "indulgences" (decorating stones, making hats, banjos from cheese boxes etc).[578] The *BMJ* commented that they were surprised that the mark system worked, but noted that the "lunatic division" at Woking the conduct of the "patients" improved when the system was implemented and number of escapes dropped and number of cured rose.[579]

At the beginning of Campbell's time at Woking the insane were separate but in the same block as other prisoners. In 1871 "the Wing" was built to separate male convict lunatics from the rest of the prison, but still treat them as prisoners. They still had prison discipline and restraint, and less "indulgences" than at Broadmoor but were treated differently to

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[573] Crosby 2003: 94.
[574] Campbell 1884: 105–6.
[575] *SHC*.QS5/6/2/1: 44–45.
[576] Every quarter all prison registers were collated. These were known as Quarterly Returns and were compiled together alphabetically in large leather bound books called Convict Prisons Attested Lists.
[577] Campbell 1884: 116–117.
[578] *Ibid*: 95.
[579] Anon 1886: 1111.

other convicts. At that time, Broadmoor housed those found insane in court or of a dangerous nature, but the number of such people grew as did the number of people who were found insane after trial or went insane in prison. In the 1870s Broadmoor's William Orange suggested that inmates whose status had declined due to poor health should go to Woking because of over-crowding at Broadmoor.[580] This happened in 1875 when the majority of criminal lunatics at Broadmoor moved to the Wing at Woking.[581] In 1875 Campbell oversaw the conversion of the West Wing of the prison into a lunatic ward this became a second site for criminal lunatics. The highest daily number of insane convicts was one hundred and ninety-six people.[582] Woking and Campbell saw different types of people, including able-bodied, physically disabled, mentally ill, young, old, male and female. Campbell predominantly worked with male convicts and it was the "criminal lunatics" which were most problematic for him.

Convicts in the lunatic division and the Wing were the hardest to manage for the prison authorities. They were poorly defined, hard to diagnose, and some were violent or disobedient whilst others were simply unwell. In 1868 Woking male prison population was listed in the prison register as consisting of men predominantly found guilty of murder, manslaughter, rape, forgery, larceny, burglary or theft, which were similar crimes to all other prisons.[583] The mental health of a convict was not noted on any centralised prison records except those from Broadmoor.[584] Convicts deemed to be criminal lunatics either during their trial or during their sentence were monitored in annual reports; but these did not become common until the 1877 nationalisation of prisons. These reports assessed "the condition and circumstance of a criminal lunatic."[585] It does not appear that prison surgeons had any training in psychiatry unless they happened to come across it at medical

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[580] Foster 2012.

[581] Partridge 1953: 78.

[582] Campbell 1884: 88.

[583] In most cases their health was described as "delicate" or "rather delicate", some were "infirm", very few were "healthy." In no instance was mental health commented on. In 1868 very few convicts were licenced (released), and some had died. TNA.HO8/174 *Quarterly Returns* December 1867. Also see TNA.HO8/192. *Quarterly Returns of Prisoners.* June 1872.

[584] TNA.HO8. *Quarterly Returns.*

[585] For example William Chisum was a barber with "unknown habits" and convicted of Larceny. He was found to be insane on 22 March 1884 but recovered after three weeks. It was unknown what caused his insanity but he came to trial insane so was sent to the city Asylum, he recovered was released. Chisum went on to commit a number of petty crimes and there were ongoing debates about his mental state. By October 1884 he had been arrested a number of times and an unnamed prison surgeon felt prison could be detrimental to Chisum's physical and mental health so he was discharged only to be re-arrested hours later. It is commented on the report that "It is usual for the surgeon of the prison to be one of the doctors to examine into the state of mind of the prisoner." (TNA.HO.144/134/A34987. 7 April 1884).

school, or had worked in or with an asylum before their appointment. It was not until 1877 that officially all insane male convicts were to be held at Woking.[586] This is because some forms of insanity were not considered severe enough to need special care, and a number of prisons had small asylum hospitals within their own grounds or an agreement with a local asylum. 1877 saw the nationalisation of prison and therefore a reorganisation programme and attempts to tighten official policy. It was still unclear exactly who counted as insane. This lack of consistent regulation caused problems for the convict prisons, as we shall see in the subsequent sections. The changing views on disabilities, insanity and morality were reflected in the architecture and management of Woking. Woking was the prison most influenced by medical concerns and the health of convicts since Pentonville opened in 1842. The bodily health of convicts was difficult enough to manage but mental health proved even more challenging, even with the new wings which will be explored in the next section.

III. Who Was A Criminal Lunatic? Were All Criminals Lunatics?

"You can't touch me; I'm a Lunatic!" a convict is supposed to have shouted at Campbell. Begging the question to contemporaries; was this person really insane?[587] This section looks at the two questions asked in the subtitle which challenged the convict prison staff of England. Who counted as a criminal lunatic? And were all criminals lunatics? This section argues that the defining of criminal lunatics became political as two government departments fought for authority over the insane criminal population of Woking. The two labels "criminal" and "lunatic" were in conflict. Criminality was dictated by the courts and lunacy was identified by PMOs, one was legal the other medical. The two were at odds in the prisons as criminality dictated punishment and insanity dictated medical care. Which should be prioritised and who had the final say in that decision? It was unclear if judicial, administrative or medical men held the decision-making power. This section follows a number of questions asked by PMOs; who was a criminal lunatic? How can you tell? What if the person is dead? How did insanity relate to criminality? And given all that information, how should criminals be categorised?

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[586] McConville 1981: 417.
[587] Anon 1925: 1049.

So first, who counted as a criminal lunatic? On paper it was simple. If someone was not capable of making the distinction between right and wrong when they committed the crime they should have been certified as insane by the court and were usually sent to Broadmoor Lunatic Asylum, or sometimes to a local asylum. If they were found not guilty on the grounds of insanity they were a "lunatic" not a "criminal lunatic" as they were not found guilty of a crime, although sometimes they might be deemed "criminally insane."[588] If a person was found guilty but insane in court, and were not considered violent they might have ended up at Woking rather than Broadmoor or a local asylum. Similarly, if they went insane in prison or were found to be particularly weak-minded, in other words, unsuitable for hard labour, they also went to Woking. The later categories counted as "criminal lunatics" or "insane criminals." Under the Lunacy Act of 1867, only those certified as insane were exempt from ordinary penal discipline. Therefore, inmates at Woking were in an odd place as they were given some special treatment compared to other convicts, but were not guaranteed it in law.

The criminal lunatic could be suffering from a range of mental illnesses and from the early Victorian era the lunatic population included people with learning difficulties. The 1845 Lunacy Act made no distinction between mental illnesses and people with learning difficulties.[589] Medical men diagnosed individuals with "idiocy" or "imbecility" which were believed to be mental illnesses. It was not until the 1886 Idiots Act that learning difficulties were defined in law as distinct from lunacy, this was effectively reversed in the 1890 Lunacy Act which muddled the two again.[590] These included being weak-minded, suffering from delusions, excitable dementia with exalted ideas or violence and dangerous, epileptic, imbecile, and dirty, melancholic and religious mania, incoherent, paralysis, suicidal. Plus, "the rest [who] showed well marked features of insanity, though not easily classified."[591] All of the terms were flexible and for Campbell the term "weak-minded" did not "give an exact idea of the class … for although some were merely eccentric and generally quiet and tractable, others evinced well-marked indications of insanity—such as general insubordination, destructive and filthy habits, and sometimes

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[588] Nevertheless those found not-guilty on the grounds of insanity were still "criminal" enough to go to Broadmoor Criminal Lunatic Asylum rather than a county or local asylum. The terminology continues to be confusing and inconsistent. Saunders found that in Warwickshire only those deemed insane enough to move to an asylum were labelled as "criminally insane" in their case notes. Saunders 1983: 235

[589] Lunacy Act, 1845.

[590] Idiots Act, 1886; Lunacy Act 1890. In the early 1900's the term "mental deficiency" was used as was the most common term from learning disorders until the 1950s.

[591] Campbell 1884: 101–102.

serious attempts at suicide."[592] Although the *BMJ* reported a defence councils' attempts to distinguish between lunacy and other mental defects, it was concluded, after much debate, that for the purpose of that trial that they were the same. This was because both had physical causes.[593] Campbell alleged that he saw at least eighty people a week, outside of the lunatic wards, who were suffering from mental weaknesses but this was not enough to put them on a sick list unless it was an extreme or an epileptic case.[594] William Guy estimated that insanity, including weakmindedness, occurred in fifty-seven out of every thousand convicts, compared to 1.67 per thousand in the general population.[595] It was, and is, difficult to give statistics because only those who were certified counted as insane and appeared in surveys. Furthermore, most data was kept by the Lunacy Commission which did not oversee Woking Invalid Prison. According to *The Times,* an estimated 65% of criminal lunatics went insane after trial.[596]

Responsibility and degrees of insanity continued to be of concern once the individual was serving their sentence. For Campbell, this could greatly alter the punishment and medical care they received. He argued that the PMO needed to understand the mental condition and "antecedents" of the convict to assess their responsibility. Responsibility being misjudged could mean "On the one hand, by an error of judgement, the malingerer might escape the punishment he has justly incurred; whilst on the other a semi-idiotic, impulsive creature might be punished for a crime for which he is not accountable."[597] The questions of responsibility and understanding ones actions was replaced, once the insane individual was in prison, by a question of work and discipline: could the individual perform hard labour, survive confinement and conform to discipline?

Campbell at times seemed cynical, querying whether many of the lunatics received were actually insane. He saw many as just being manipulative and disruptive, so it was imperative to correctly assess all the patients' genuine mental states.[598] It was part of a PMO's duty to notice when someone was a malingerer, faking either physical or mental illness.[599] Being able to understand from a medical or scientific standpoint if symptoms of

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[592] *Ibid*: 78.
[593] Anon 1868: 226.
[594] Campbell 1884: 75.
[595] Saunders 1988: 276.
[596] Anon 1869a: 559.
[597] Campbell 1884: 80.
[598] *Ibid*: 86.
[599] See forthcoming article on malingering in Victorian prisons and the First World War trenches by Coreen McGuire and Laura Sellers.

mental illness were really symptoms or signs rather than moral depravity or malingering was of great importance. Campbell wrote "to defeat these desperate men is a duty which the medical officer owes the service" but even the most contentious PMO would be "fortunate if he escape[d] the ungenerous charge of being too strict on the other hand or easily deceived on the other."[600] Luckily there were "unusual remedies" (such as electricity, water or laxatives) which were "welcomed by the real sufferer, generally prove repugnant to the schemer, and when combined with strict supervision usually succeed in unmaking the imposture."[601] Malingering seems to have been perceived by prison staff and government as a wide spread and consistent problem. This fear probably meant less people in prison were categorised as mentally ill than might have been otherwise. The PMOs needed to balance healthcare and punishment and the threat of malingering made the distinction between well and unwell, sane and insane harder to see. It was often reported in the newspapers that convicts would act "balmy" in order to get into an asylum or to Woking which was perceived as an easier life than a standard convict prison.[602]

Given the fear of malingering, how could a PMO tell if a (living) convict was a criminal lunatic? There was no simple solution. The actions and words of the individual obviously had to be taken into account. Sometimes family trees, histories of insanity, crime, alcoholism or vice in a family could provide evidence. Psychiatry and psychology had not yet developed extensive classificatory tools or diagnostic labels. Convicts were assessed in prison by the PMO in their institution, then they were reassessed at Millbank, and finally again at Woking to corroborate the diagnosis. The large number of people who were labelled in some way mentally deficient (even if not deficient enough to go to Woking or Broadmoor) was high. By the 1870s, a general pessimism in the health of the nation was growing and an increasing number of people were in prisons, asylums and workhouses and there seemed to be no cure for these people's illness and social problems.[603] It began to be asked how insanity and criminality interrelated.

Pessimism in the psychiatric community from the 1860s has been well documented, but it also existed within prison medicine and management.[604] It was unclear if prison numbers were rising because more people were innately criminal, more were insane so committed

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600 *Ibid*: 71.
601 *Ibid*: 71.
602 Anon 1881: 1.
603 Humphrey Southall and the Great Britain Historical GIS Project 2009–2017; Shepherd 2016 argues this was not the case in Broadmoor, it was in many county asylums.
604 Chamberlin and Gillman 1985; Browne 1985; Showalter 1987; Clarke 1988; Saunders 1988; Oppenheim 1991; Scull 1993; Shorter 1997; Finn 2012a.

crimes, or new groups of people were impoverished or immoral. Alternatively, it may have been that crime statistics were growing, or appeared to be growing because policing was improving, and the courts were stricter so sentenced more individuals. A similar story was playing out in asylums. More patients were being admitted and not many were being cured.[605] There was a distinct problem of equating sanity with social normality and behavioural acceptability.[606] In psychiatry degenerative theories were emerging in the 1850s to explain the increase in asylum patients, to many Darwinism seemed to confirm this explanation for insanity.[607] It was not that the definition of insanity was expanding but that the population was degenerating.[608] Degeneration theory was not adopted uniformly, although it can be seen in the Habitual Criminals Act (1869).[609] Evidence for degeneration was found by some in Darwinian theory, where degeneration was the opposing force to evolution, in statistics generated by prisons, workhouses and asylums, and in apparent social decline (poverty, insanity and criminality) which showed a weak and degenerate population.[610]

In 1866, *Chambers's Journal* reported that "Criminals are a race apart, for whom the ideas, the rules, and the aspiration of ordinary life have no meaning, whose war with society is, in the most cases, inextinguishable, interminable—whose lives are not so much perverted as inverted: a race too, whose females are infinitely more unmanageable and inhuman than its males."[611] This fear of the criminal class gave good reason for the PMOs, prison management and interested public to seek to understand the criminal and his/her mind. Maudsley believed "the relationship between insanity and immorality was deterministic", and "For [Maudsley], as for many other doctors, bad and insane were virtually the same.[612] As a result of this "by confusing immorality and other forms of nonconformity with insanity, doctors threatened to turn the asylum into a reformatory."[613] Which to some degree is what Woking was doing.

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[605] See Scull 1981; Bynum *et al.* 1988.
[606] McCandless 1981: 341.
[607] Brown 1985.
[608] See Maudsley 1867a, 1867b; Chamberlin and Gilman 1985; Pick 1989; Waller 2001.
[609] Pick 1989: 179, 182.
[610] See Galton 1869 Chamberlin and Gillman 1985; Browne 1985; Showalter 1987; Clarke 1988; Saunders 1988; Scull 1993; Shorter 1997 for discussions on degeneration and psychiatry.
[611] Anon 1866b: 406–407.
[612] McCandless 1981: 354.
[613] *Ibid*: 355.

Campbell believed that "mental deficiency" was not uncommon in habitual criminals—describing some as dull-witted and others sharp and cunning like monkeys.[614] He felt for "the habitual criminal or those allied to the semi-imbicile class... encouragement and punishment seem alike ineffectual in restraining their bad dispositions."[615] As he saw it "After repeated convictions, these men appear to be so thoroughly debased and hardened as to resist any system of treatment."[616] This stereotype of male criminals who could not be changed by the penal system had arisen in the first half of the nineteenth century.[617] Repeat offenders were considered more violent than normal convicts or criminal lunatics. Campbell also gives examples of self-harm and attacks on others, including stabbing a "companion" in the loin and puncturing a kidney.[618] This was seen as evidence of immorality and degeneration, but was it unique to criminals?

There were few opportunities to make psychological observations to study the criminal mind, and even less to study the brain. Psychiatry was moving towards a pathological understanding of the mind and Campbell seems to have followed the trend.[619] Campbell reported the most common forms of insanity which, excluding weak-mindedness, were delusions, followed by excitable dementia. There were also cases of epilepsy, mania, religious mania, paralysis, and suicidal tendencies.[620] These could manifest themselves in the brain or stem from pathological damage to the brain. Campbell also believed that post-mortems of the brain could reveal why a particular person was "troublesome in life" without showing symptoms of disease or insanity.[621] Suggesting to him that there were common causes between insanity and criminality, but were they the same thing? Campbell's views were consistent with the vast majority of his contemporaries who by 1886 accepted the brain as the seat of the mind. following Paul Broca's research, although Campbell gives no indication in his book that he was aware of, or interested in contemporary trends in psychology.[622]

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614 Campbell 1884: 73.
615 *Ibid*: 119–120.
616 *Ibid*: 130.
617 Saunders 1983: 227–8.
618 Campbell 1884: 86–87.
619 Clark 1981: 271–312; Also see Young 1968; Scull 1981, 1993; Bynum *et al.* 1988; Gilman 2006; Finn 2012a Mausdley 1867a, Ferrier 1873a, 1873b, Coxe 1872, Bevan-Lewis and Clarke 1878 and Bevan-Lewis 1878b for some examples of pathological psychiatry.
620 Campbell 1884: 101.
621 *Ibid*: 81.
622 Smith 1981; Harrington 1987; Oppenheim 1987; Finn 2012a..

It was difficult to explain the source of criminals' lunacy when they were alive, although inheritance or environment might explain it, and there were different challenges but perhaps more information to be gained if they were dead. If a convict died in prison their body belonged to the state and thus was available for post-mortem studies which might reveal anatomical or pathological explanations for their actions in life. Campbell was not a psychiatrist but would have done anatomical studies and dissections as a medical student. He observed that he looked at criminal lunacy particularly through "many" post-mortems where he found that the physiology of prisoners' skulls was "remarkable." He reported numerous convicts had "disease of the brain" with softened tissue and effusions, one Campbell described as having the consistency of "thick cream".[623] He believed that many convicts—particularly repeat offenders—had underdeveloped brains and prison life could increase stupors, difficulty in answering questions, sickly appearances, and dilated pupils. Campbell felt this was partly due to prolonged seclusion in separate confinement.[624] Which the Lunacy Commission cautioned against. The need to make a space appropriate for the insane explains some of the relaxations of the separate system at Woking. But if criminality and insanity were inter-related it called into question the philosophy underpinning and the safety of the whole convict system.

Following post-mortems Campbell argued criminals' brains often weighed less than average.[625] The weight of the brain was considered an important indicator of the mental health of the patient in life.[626] Campbell returned to the weight of brains every time he mentioned post-mortems, possibly because this is one of the few things which could be done consistently and create good statistical data. Campbell thought the size of the brain could be predicted through physiognomy and by studying the skull, claiming that post-mortems showed this to be true. He noted "that a large brain is an exception."[627] He assumed most invalid convicts who died in prison would have a small brain reflecting their perceived intelligence and morality. Campbell's attitude to post-mortem brain study was not unique, indeed it reflected rather standard practice.[628]

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[623] Campbell 1884: 101, 80–81.
[624] *Ibid*: 74–5.
[625] *Ibid*: 74, 101.
[626] Finn 2012a: 126. There is no surviving evidence that Campbell weighed brains, or parts of brains himself but for many it was believe that insane brains were different form healthy ones so would weigh a different amount. Similarly, different parts of the brain served different functions so would have different weights. Finn 2012a: 125-127.
[627] Campbell 1886: 74.
[628] See Finn 2012a: 89-133.

Having failed to conclusively identify who was insane or weak-minded, PMOs found insanity to impact on a large part of the criminal population. PMOs realised they not only had to categorise insanity but possibly address bigger questions about how the mind worked. The boundary between insanity and criminality was blurred, and the question of which actions were caused by defective minds and which by immoral ones arose. Psychiatrist Henry Maudsley thought criminals "go criminal, as the insane go mad, because they cannot help it."[629] Sometimes the boundary was even less distinct. An anonymous author wrote "as a genuine fool is not conscious of his folly, so, perhaps, the genuine criminal is not thoroughly conscious of his crime. It was the natural, if not the inevitable, thing for him, with his constitution and in his circumstances. Morally insane, or a sort of moral idiot, he cannot recognise a world beyond the world immediately around him, of which he, self-feeling mortal, is at the centre" [630] The author goes on to argue that the term moral idiot can be applied to anyone who has not fulfilled their potential moral development, so it cannot be applied to monkeys, for example, because they lack the potential for moral choice but can be applied to convicts.[631]

Labels emerged for mental illnesses, but these were mostly defined by psychiatrists and asylum doctors and then adopted and appropriated in the prisons. Generalisations about criminals were "handicapped…by the lack of any adequate classification of criminals, and tends to assume to readily at times that there is a valid entity- the criminal" says Short.[632] Unfortunately "the criminal" was an ill-defined entity. A habitual criminal was not necessarily the same as someone who belonged to the "criminal class", although they were often one and the same. It was generally agreed that the majority of criminals did belong to the criminal class which sat below the working poor on the social hierarchy. By attempting to classify insanity in criminals, new classifications of criminality emerged.

The distinction between the habitual offender and the casual offender had been defined by 1857 when Lloyd-Baker contrasted "casual and regular crime" with "the other who goes out to seek for the opportunity of stealing, and that as a daily practice and habit."[633] Variants on this basic definition carried through and informed the debate. It also helped PMOs like Campbell distinguish between hardened criminals and criminal lunatics. During the 1860s, different types of offender were identified, including the "casual"

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[629] Maudsley quoted in Saunders 1988: 277.
[630] Prison Matron 1863: 71.
[631] *Ibid*: 70.
[632] Short 1960: 147.
[633] Goldman 2002: 162.

offender and the "habitual offender." A casual offender was not part of the criminal class, normally they would have done something on impulse caused by emotions or temptation. A habitual criminal, however, was a repeat offender and a hardened criminal. These people were likely to 'contaminate' other people, particularly juveniles or the weak-minded, with criminality. This kind of criminality at times was understood in similar terms to a disease in that it could be caught from other infected individuals.

"Hereditary criminal", like "criminal lunatic", was a flexible term. It was sometimes used to describe habitual criminals, sometimes those who were believed to be educated in crime by parents or other locals, and sometimes used in a more Darwinian sense were the offender was biologically inclined to commit crime. This latter group was of concern to the likes of Francis Galton and the eugenicists. The former group could be reduced by good moral education and many casual offenders would be deterred by the harsh punishments that they would face. The habitual criminal could or would not be deterred, and seemed to resist reform when they were in prison. The habitual criminal could be explained in moral or physical terms, and from the late 1860s, hereditary explanations were introduced.

Following the Penal Reform Act of 1864, the focus moved to the supervision of released offenders and the control of "habitual offenders" who were becoming an established category in penal thinking.[634] It was generally agreed by all (both reform and punishment camps) that sentences needed to be longer to have any impact, but most criminals were imprisoned for only a month or less (because they majority had committed petty theft). Sentences became generally tougher but the prisons during the late 1860s then focused on the habitual or hardened criminals, who had longer sentences, and this continued into the 1870s adding to the burden of the PMO to balance health and punishment.

The 1869 Habitual Criminal Act and the subsequent 1871 Prevention of Crimes Act were the first legislative moves to deal with a specific class or type of criminal and also the first to allow different treatment of different groups of criminals. As part of this legal change, the burden of proof switched for those deemed to be in the criminal class—they had to prove their innocence rather than the prosecution prove their guilt.[635] Goldman suggests that the "habitual criminal" terminology may have been a label invented so there was someone to hunt.[636] The language also created a group of people to blame for increases in

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[634] *Ibid*: 162.
[635] *Ibid*: 169.
[636] *Ibid*: 169.

crime statistics and the apparent failure of the convict system to deal with this problem. The idea of casual and hardened criminals did already exist and the idea of the "habitual criminal" or the "hereditary criminal" could be found in journals. The 1871 Act corrected problems with the 1869 Habitual Criminals Act by making it clearer who the criminal classes were and by ensuring that the police were provided with sufficiently detailed information and photographs of criminals to be able to identify them as past offenders or persons on a ticket of leave.[637] It also gave the court the ability to decide on the level of supervision and surveillance a convict needed after release.

Campbell lamented that the habitual criminal was most likely to become a convict sentenced to penal servitude and often the most "insubordinate" in the prison. He was not optimistic about the effectiveness of prisons and felt that for habitual criminals "their histories, as a rule, showed that they had long led a life of vice and crime, so that there was little hope of their permanent amendment."[638] He wrote "these troublesome creatures are often the children of debased and drunken parents, generally of the habitual criminal class; so the inherent hereditary predisposition, as well as the bad example set them at home, and renders removal from such baneful influences the surest safeguard."[639] It is unclear in what terms Campbell thought criminality and vagrancy could be hereditary as he simply states it to be so.[640] It does not appear that he is thinking in Darwinian or other evolutionary terms, but rather believes in a more colloquial form of heredity. The complexity in the language did not help untangle who was insane, a degenerate or had inherited traits.

We have already come across categorisation based on gender, age, or debt, rather than crime-committed in this thesis, and one of the consequences of trying to understand the criminal mind was that criminals also subdivided further. We have seen that prison medical staff (and the law) struggled to ascertain who was insane and to what degree, particularly after a convict had been found guilty. The legal and medical consequences of being certified as insane stripped an individual of their responsibilities and rights to own properties, but similarly ensured a degree of medical care not guaranteed in the prison system. Within the system, it was unclear if there were any benefits to certifying lunatics. Certification would prioritise "lunacy" over "criminality", taking the individual out of the

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637 Prevention of Crimes Act 1871.
638 Campbell 1884: 89.
639 *Ibid*: 105.
640 *Ibid*: 107.

punishment and reform system encouraged by the prisons and placing the individual into the care of the Lunacy Commission, as we shall see in section IV. If the convict was not certified but still found to be insane after his trial they would probably end up in Woking. There the convict would be overseen by the prison directors who encouraged reform and punishment through labour, but also by the medical staff who were obliged to provide medical care whilst supporting the prison system.

The staff at Woking were not experienced psychiatrists, indeed it would appear Campbell and his colleagues were appointed because of their prison background, not their ability to treat the insane or physically disabled. Campbell and his colleagues were not at the forefront of psychiatric research but engaged with standard rhetoric about criminals and mental illness as well as performing post-mortems. Campbell does not appear to have expected to learn a huge amount more about criminals from medical or statistical research. But attempts were being made to ascertain if there was a mental characteristic which linked to criminality. In its most watered-down sense, criminals were perceived as "weak-minded" or simply immoral, while at the greatest extreme some believed all criminal acts were viewed as being caused by insanity. It was of utmost importance to ascertain the mental capacity of criminals as this would affect, how they could be convicted in court. However, in prison it was more important to have a working categorisation system that would allow for medical care and reasonable levels of punishment. These people were uncertified as lunatics, and convicts in the eyes of the law after all.

IV. Care, Punishment and Legal Definitions: A Failed Experiment?

The need to classify and organise criminal lunatics was highlighted in 1874 to prison authorities. Legally, any uncertified criminals who reached the end of their sentence had to be released, even if they were insane. The majority of criminal lunatics had never been certified as insane because they did not need to be when within the prison system.[641] Sometimes provision was made for an individual to be certified so they could then be sent to a county asylum, but typically they were either released to their family or a local workhouse. Normally the county asylums did not want convicts; it was feared that

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[641] There were a number of similar loopholes in the Lunacy laws, for example in 1868 it was realised that certifications made in different parts of the UK were not valid in the other countries. Ie incarcerating an insane person in England who had been certified in Scotland was illegal. Anon 1868a: 225.

criminals might lead others morally astray, turn others criminal, or at the very least they would be disruptive and loud.[642] Furthermore, asylums were often at full capacity and did not want any more patients, particularly ones which were seen as virtually guaranteed trouble.[643]

Without a proper understanding of insanity or of criminality it, seemed that troubled individuals were destined to move around the Victorian institutions one by one. By following the debates between the HO, Prison Commission and Lunacy Commission in detail through the 1870s and 1880s this section argues the legal status of Woking as an institution and the legal status of the people incarcerated inside it was confused. This section looks at the challenges presented by the disordered labelling of convicts and criminal lunatics as discussed in section III and explores how this affected penal policy and the prison experiment from the 1870s, arguing that ultimately the unclear labelling and categorisation of criminals created new types of criminals and also led to the closure of Woking Invalid Prison.

In October 1874, the Deputy Governor of Millbank had written to the St George Union (a workhouse) to inform them that the convict Henry Balls was to be released the next day having completed his penal servitude. Balls was a "dangerous lunatic", so was to be handed over to the master of the workhouse. Balls was admitted to the workhouse on 14 October. The next month, on 17 November, another convict, John Maloney, following similar correspondence, also joined the workhouse.[644] Despite being ex-convicts and

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642 "By the Statute 30 Vict. C.11… criminal lunatics sentenced to any period of imprisonment, are discharged from the Government establishment at Broadmoor, or elsewhere, at the expiry of such period and transferred to the respective County Asylums. The disastrous effects of this system, both as regards to cost and good order, discipline and security to other and harmless patients, can be more easily imagined that described. The vicious and criminal propensities of this class of Lunatics running equally strong and irregular after as before the expiry of their sentence, they are objects of anxiety and alarm to officers and attendants, and of danger to patients, and a proportionately increased staff is requisite to keep constant watch over this pernicious admixture." *SHC*.QS5/6/2/1: 27. In 1852 the Lunacy Commissioners had sent a circular to local asylums asking for tier views on criminal lunatics in ordinary asylums. The overwhelming response was negative. As Saunders summarised they thought "such association was degrading to non-criminal patients; the behaviour of the criminal lunatics was morally offensive, insubordinate and caused dissatisfaction among the other inmates; the presence of criminals necessitated greater security in asylums than would otherwise be needed and deprived ordinary patients of their fair share of staff attention; while criminal patients themselves resented that they could not gain discharge in the same way as ordinary lunatics." Saunders 1983: 225

643 Saunders 1893: 237-8. Saunders suggests Visiting Justices may have been reluctant to move prisoners to asylums because they were aware of inadequate staffing in asylums, the security risks, the increased costs of caring for a person in an asylum over a prison, the lack of space (or the cost of providing it), because someone in an asylum might be a burden to the public long after their sentence expired or because of the fear of malingering. 234-9.

644 *LRAB* 2 December 1874: 8.

deemed lunatics they both promptly left the workhouse. Maloney escaped, and Balls discharged himself. The release of these two men from Woking and the Millbank would kick start a debate about the legal standing of lunatic convicts which would continue for the next twelve years.

A request that correspondence from the Board of Guardians of the St George Union be shown to Richard Cross, the Secretary of State, came from Charles Spencer Perceval (Secretary for the Office of Commissioners in Lunacy, Whitehall) to Sir Adolphus Liddell (Under-Secretary at the HO). This kind of correspondence shows the fate of criminal lunatics was of concern at the highest levels. The Lunatic Commissioners pronounced that the Balls and Malone cases were unacceptable; workhouses were not suitable for dangerous lunatics.[645] Consequently the Commission recommended in the future dangerous lunatic convicts should be sent to asylums on their release. A few days later the Lunacy Commission drew attention to the lack of clarity in the procedure for dealing with convicts who were insane once their penal servitude was up.[646] In the cases of Balls and Maloney the decision had been made to hand the men over to the "Parochial Authorities" because the staff at Woking and Millbank could not apply to send them to the over-subscribed local asylum, and removals to Broadmoor were temporarily suspended "so that men of this class were accumulating in convict prisons."[647]

The Criminal Lunatic Act of 1867 meant that all "criminal lunatics" were to be treated as "lunatics" at the end of their sentence but this only applied to those who had been certified.[648] In prisons, the individual's status as a convict usually outweighed their medical labelling as a lunatic. As such it appeared that unofficially once their sentence was up and they were no longer a convict, they were perceived to some degree to no longer be a lunatic, as this labelling was applied in conjunction with their criminal status. In other words, as discussed in section III, these convicts were not "criminals" and "lunatics" they were "criminal lunatics" when they were in the penal system. This was then problematic when they left. It became necessary to untangle these two things, legally and medically

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645 *LRAB* 2 December 1874: 8*;* It had always been practice to release the insane from prisons, In 1859 a letter to the *BMJ* highlighted the practice in military prisons, describing it as "repugnant and offensive" to the public, the soldier and the local unions. Even if it was within the law. Dartnell 1859: 989.

646 *LRAB* 2 December 1874: 8. It was policy in the 1860s and 1870s to send convicts from Woking to Millbank before their release. This ensured appropriate records were kept consistently in an attempt to track repeat offenders.

647 *LRAB* 8 December 1874: 9.

648 Criminal Lunatics Act 1867.

during and after the convict's sentence. This called into question the labelling and categorising systems which separated criminals at Woking from those at Broadmoor.

The words "convict" and "patient" were used in the prisons by medical staff, governors and commissioners to indicate if a convict was in the main prison (i.e. healthy) or in the prison hospital (i.e. not healthy). In Woking, the distinction between "patient" and "convict" was more confused. Almost every individual in the prison was both "patient" and "convict" so how should care for their illnesses, physical or mental, be balanced with the punishment they had to endure for their crime? As noted, the convicts of Woking, unless confined to the hospital or a padded cell, had to engage with light labour. This compromise worked well, at least to the inspectors, for those with physical illnesses or disabilities but was more complicated for those who were insane.

The legal state of convicts at Woking was informed by the contemporary understanding of Broadmoor's patients. In December 1873, a report from the Lunacy Commission into the state of Broadmoor had recommended changes in the law to "make better provision for the custody and care of criminal lunatics." It argued that in 1872 there were sixty-three admissions to Broadmoor, of which only three belonged to the criminal class.[649] However, many of those in Broadmoor had been acquitted on grounds of insanity in court, suggesting that their acquittal meant these individuals were not part of the criminal class despite having committed a crime. The definition of a criminal or a member of the criminal class for the Lunacy Commission was someone who was morally responsible for their actions.[650] This is how they perceived the convicts at Woking; insane but responsible.

In 1874 the Lunacy Commission, the Prison Commission and the Home Office agreed that criminal lunatics at Broadmoor should be separate from other patients there.[651] In particular, the criminally insane needed to be separate from those detained at Her Majesty's pleasure. A plan to move the criminally insane to Woking during the building work was suggested.[652] This did eventually happen in 1875 although finances had to be decided first. In December 1874 whatever money was requested to improve Broadmoor was denied. This continued into the New Year when a note came back to Broadmoor saying that the Treasury refused to pay for the changes to the site. Someone added a note stating, "I cannot help doubting whether the subject is entirely understood at the

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649 *LRAB*: 1.
650 *LRAB* December 1873: 1.
651 *LRAB* 30 April 1874: 2, 7 May 1874: 3.
652 *LRAB* 7 May 1874: 3.

Treasury."[653] Implying the distinction between different types of criminal lunatics was not of great importance to those creating the budget. The Treasury was eventually convinced and in February 1875 permission to separate the two classes of lunatics at Broadmoor was given and a budget of £7,000 was set.[654]

It was the movement of individuals between Woking and Broadmoor that led the Commissioners in Lunacy to write to Liddell at the HO to ask whether Woking was an asylum and if the wards there had been appointed as asylums under the Criminal Lunatics Asylum Act. Liddell responded that Woking Prison had not been appointed an asylum under that Act and the convicts referred to, although insane, are at Woking "as persons under order Sentence of Penal Servitude", prioritising their status as convicts. Liddell wrote "Woking is not a Lunatic Asylum, legally [it is] available only for persons under penal servitude and especially appropriate to those who require medical care for treatment for diseases of both body and mind. Adequate provision has been made by law for its inspection and supervision by Directors…"[655] By August 1878 Richard Cross, the Secretary of State, had clarified that the Lunacy Commission did not need to visit Woking having decided it was not an asylum.[656] Concerns about this were expressed in another pen stating that in asylums, the insane were protected from cruelties but they might not get this protection in prison, the author hoped the directors were aware of this.[657]

Presumably the discussion about how Woking should be managed and overseen did not stop between 1878 and 1884 but the archive records are lacking. Wiener suggests that in this period, Harcourt as Home Secretary and the Lunacy Commission did not feel in a position to challenge Du Cane's dominance over the nation's prisons.[658] This changed for unknown reasons in 1884 when the "Criminal Lunatics Act" was passed. The Act gave more power to the HO to change prison regulations relating to criminal lunatics and those suffering from "imbecility of mind" and allowed prison directors to certify the insanity of prisoners in prisons under his jurisdiction.[659] According to Wiener, the prison authorities made this law difficult to enforce and placed as few convicts as possible into the weak-minded category.[660] Following the Act it was felt that the regulations for lunatics in the

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[653] *LRAB* 30 January 1875: 11.
[654] *LRAB* 13 February 1875: 14
[655] *LRAB* 19 July 1876: 12–13.
[656] *LRAB* 9 August 1878: 22.
[657] *LRAB* 19 July 1876: 12–13.
[658] Wiener 1990: 318.
[659] Wiener 1990: 318; *LRAB* 17 October 1884: 15.
[660] Wiener 1990: 318.

Woking Wing" needed to be clarified. Having inspected them, the HO believed that the Regulations did not provide for the proper classification of inmates (such as first offences and those guilty due to insanity, violence or drink from veteran thieves). The minutes say, "it appears to be necessary to decide how the certified criminal lunatics at Woking convict Prison are henceforth to be dealt with." Furthermore, "the Lunatics Wing should be appointed a criminal Lunatics Asylum under the Broadmoor Act… or the lunatics confined in Woking should be sent to Broadmoor. The former course appears to be the preferable one."[661] Consequently, the lack of clarity in classifying convicts was of concern and it was starting to become apparent that laws relating to lunacy and prisons were not compatible.

In April 1885, Godfrey Lushington, who had just been appointed Under-Secretary of State, wrote to Harcourt, by then the Home Secretary, to say that the Wing was not in line with parliamentary policy. "In my previous memorandum I have already stated that the maintenance of Woking Wing as a place of detention for lunatic convicts is directly contrary to the policy of parliament", he wrote. "And so long as this is the case the situation appears to me to be one of danger. Supposing that a lunatic convict in Woking commits suicide or is murdered by any of his companions or is ill used by the attendants[?] [P]ressure would initially be pressed on the system both by the judge at the time and by parliament and there would be no defence." Importantly, he believed "constraint and confinement are the alpha and omega of penal servitude, while all possible freedom and sociability are recognised as the most effectual means of treating lunatics."[662] Showing an awareness of contemporary asylum treatments. Lushington did not see a distinction between lunatics and criminal lunatics, he continued, "if it is objected that those are criminal lunatics and not ordinary lunatics the obvious answer is that we insist on sending criminal lunatics from local prisons to ordinary lunatic asylums because they are not indistinguishable from ordinary lunatics..." Consequently, Lushington argued, the criminal lunatics at Woking should be under the jurisdiction of the Lunacy Commission.[663]

In May 1885 there were sixty people in Woking the PMO considered "hopeless". These relatively low numbers were perhaps because the prison authorities did not wish to give up Woking to the Lunacy Commission so reduced the number of convicts categorised as uncertified criminal lunatics, and did not include the weak-minded. There were eighteen

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[661] *LRAB* 10 March 1885: 17. Recorded by Fowler.
[662] *LRAB* 22 April 1885: 19.
[663] *LRAB* 22 April 1885: 19.

"troublesome" cases and twenty-six "quiet and easy to manage" cases who could go to local asylums as criminal lunatics until the end of their sentence (paid for by government) or discharged and converted to pauper lunatics to whose upkeep the treasury would "contribute." This left sixteen dangerous cases who would either have to stay at Woking or go to Broadmoor, and seventeen who were not considered hopeless so possibly "amenable to medical treatment."[664] If this were the case then less individuals needed moving and asylums could take in a large proportion of criminal lunatics. It was, however, pointed out that that the asylums were not happy about taking lunatics from local prisons (which has been happening for a long time), so they definitely would not want convicts who were perceived as more dangerous. It was predicted that there would be complaints from local authorities which needed to be taken into consideration.[665] These letters elude to the public, medical and government perceptions of criminals; dangerous, disruptive, and immoral.

In June, Edmund Du Cane was warned that if Woking were "certified for Lunatics" the Lunacy Commission would make an entry or minute after each visit which would appear in their annual report. The warning came from Robert Gover, Inspector of Prisons, who suspected the commission would approve of diet, clothing and sanitary arrangements but would be less amenable to what they would consider "unfavourable features in the position, construction and management of this division of the prison." Highlighting the different policies in relation to health and punishment he went on to say what would be considered by the Lunacy Commissioners as "drill" or "discipline" must be maintained in the prison and the Wing for the good of the prison, regardless of mental illness. The construction of the Wing meant prisoners were locked up at meal times which Gover suspected the Lunacy Commission would object to as excessive seclusion, going against contemporary psychiatric policy. The cost and physical difficulty of making the Wing suitable for the Commissioners approval would be considerable, thus Gover advised it would be better to build a new block. He regretfully suspected however, that "in this matter the Commissioners in Lunacy would of course feel themselves bound to pay some deference to general medical opinion."[666]

It seems that the Prison Directors, Prison Inspectors, Lunacy Commission, Broadmoor Staff, HO and Secretary of State were all involved in deciding what to do about Woking.

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[664] *LRAB* 18 May 1885: 20.
[665] *LRAB*: 20A.
[666] *LRAB* June 1885.

Letters and memorandums were rapidly written, and in July 1885 one such memorandum caused outrage.[667] It brought to the fore the on-going disquiet between the Prison Directors and the Lunacy Commission about the management of Woking. The memorandum laid out a history of Woking which was not universally accepted. In particular, the legal status of the lunatics in Woking was in question. According to this history in July 1876 the Lunacy Commission asked if Woking had been approved as a Criminal Lunatic Asylum, noting that if it was they were required to visit, if not they had no authority but were willing to advise upon request. It was concluded Woking was not an asylum and the author reported that the Commission was "relieved".[668] As presented this should have been the end of the matter, confirmed in 1879 when a Royal Commission led by Lord Kimberly reported "entire approval" of Woking Prison. The Lunacy Commission disputed this history.[669]

In 1880, a Departmental Commission was appointed to report on criminal lunacy and asked several questions which summarised the concerns about Woking. First "whether it was desirable that criminal lunatics should be separate from pauper lunatics to a greater degree than at present"? Second, "whether special provisions should be made for the care and custody of imbeciles and lunatics who were habitually criminal"? Third, "whether any change should be made in the incidence of charge for the maintenance of any class of criminal lunatics". And finally, "whether, having regarded the above questions, and modification should be made to the purpose to which Broadmoor Criminal Lunatic Asylum is at present appropriated."[670] These questions highlight the unclear status of criminal lunatics outside Broadmoor. The Departmental Commission felt it was not legal to keep lunatics in Woking so instead they should be removed to an asylum or another "fit receptacle for insane persons." In the meantime, it was concluded the Lunacy Commissioners should visit Woking.[671] However, "nobody" believed that a once a year visit by the Lunacy Commission (made up of barristers and medical men) would be better than frequent visits from medical inspector and directors.[672] Legally, then, the Lunacy Commission had to oversee Woking, but then there were two authorities at play, the Prison Directors and the Lunacy Commission. It was unclear what to do next. Should criminal

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667 *LRAB* 30 July 1885: 21.
668 *LRAB* 30 July 1885: 21.
669 *LRAB* 30 July 1885: 21.
670 *LRAB* 30 July 1885: 21.
671 *LRAB* 30 July 1885: 21.
672 *LRAB* 30 July 1885: 21.

lunatic be "treated like ordinary lunatics" as Lushington suggested, where asylums would be "as little like prisons as possible" and would "dispense with all restrictions that [were] not absolutely necessary, and to allow, so far as is safe and practicable, freedom of social intercourse".[673] It was a perceived risk that the Prison Directors might "find themselves someday gibbetted for improper treatment of lunatics".[674] But, at the same time, the inmates of Woking were primarily convicts and the Prison Directors felt they should be treated as such.

The question continued to be asked was Woking an asylum, part asylum, or not an asylum? Whichever it was, how did they balance the convict's status as a convict and a lunatic? Would the Lunacy Commission "recognise the propriety of 'different rules and modes of treatment' for these prisoners"? After all, because someone was a lunatic that did not stop them from being a criminal.[675] At this stage it seems that 'mental illnesses' were seen as no different from 'illnesses'. It was indicated that if a convict had heart complaints they would treat him in the prison not a hospital, so why should lunacy be any different?[676] A letter from the Prison Directors Office pointed out that the Secretary of State could send someone to a smallpox hospital if they were ill and release them when they recovered, so again it is asked, what was different about lunacy? These lines of argument demonstrate that the authors saw mental illness as similar to any other kind of illness. This argument reflected the psychiatrists who were medicalising their profession arguing that psychiatric illness had anatomical basis in the brain pathologising mental health.[677] Others argued that an insane prisoner's liberty was not being contradicted as there was no legal obligation to send a prisoner to a lunatic asylum until his release. Legally, criminals had to be provided with healthcare, which they got at Woking. Furthermore, it was noted that there was no need to certify lunatics until they left to go to an asylum unless the Secretary of State had requested it.[678] As such the criminal lunatics in Woking did not legally have the status of "lunatic". Consequently, they did not fall under the Lunacy Commission by law, they did not legally require treatment or protection, and could not be forced to enter the asylum system on their release until certified. The difficulty then was that the convict lunatics should be certified if they were indeed insane. But if they were certified, they should be at

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673 *LRAB* 21–24 September 1885: 23.
674 *LRAB* 21–24 September 1885: 23.
675 *LRAB* 21 September 1885: 22.
676 *LRAB* 21 September 1885: 22.
677 *LRAB* 21–24 September 1885: 23.
678 *LRAB* 21 September 1885.

an asylum in accordance with the Broadmoor Act, dispensing of their penal servitude and hard labour.[679]

It became almost inevitable that Woking would either have to close or at the very least change function. Various suggestions were made, including converting Parkhurst Convict Prison on the Isle of Wight into a convict lunatic asylum. Like Woking it was in two halves the upper of which could be converted into an asylum. It was, however, noted that Parkhurst was maybe cheaper to convert to an asylum than other sites, but the Queen probably would not agree to an asylum so close to Osbourne House.[680] With Parkhurst not an option, where could criminal lunatics go? The possibilities were converting Huntingdon Prison in Cambridgeshire or Woking Invalid Prison into full asylums, or to extend Broadmoor. Initially, it was estimated that only seventy-eight lunatics needed housing as others could go elsewhere or were just weak-minded not lunatic. It was advised that the incurable and harmless should be sent to normal asylums to help keep numbers low.[681] An unknown author in the Prison Department wrote to the Secretary of State saying that Woking was a poor place to "experiment" with new policies. They suggested that the lunatic wing at Woking should not be different from the rest of the prison in name, but in reality, it would be run by separate management and staff. The author added "Woking is referred to as differing from Broadmoor, and being structurally constructed as a prison and therefore categorised by gloom, confinement and want of outlook. [...] it is an extraordinary mistake…" It was constructed as a light and airy hospital. Furthermore, some of the existing staff would be qualified to work at this new asylum which would help with transition.[682] Nevertheless, Woking did not come out as the forerunner to be the new criminal lunatic asylum, probably due to economic arguments and the Lunacy Commission's dislike of the prison-like feel of the building.

Consequently, the debate continually returned to Broadmoor, and Warwick Mourhead from the asylum wrote to the Under-Secretary of State in November 1885 advising that accommodation for the convicts held at Woking could be provided at Broadmoor if a new building was erected.[683] The staff at Broadmoor felt it was unwise to build a block for less than one hundred men and estimated costs at £20,000.[684] Other estimates suggested

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[679] *LRAB* 14–16 October 1885: 24.
[680] *LRAB* 21–24 September 1885, 14–16 October 1885: 23, 24.
[681] *LRAB* 21–24 September 1885: 23.
[682] *LRAB* 24 November 1885: 28.
[683] *LRAB* 9 November 1885: 27.
[684] *LRAB* 9 November 1885: 27.

extending Broadmoor would cost approximately £150 per inmate. This estimate came from an anonymous source who believed economically "the most efficient course is to let these things alone as they have been for nearly 10 years."[685] But letting things alone was not an option.

By January 1886 Woking and Huntingdon Prison were still under consideration. Howell, the Surrey County-Surveyor reported that Huntingdon was unsuitable to be a convict-asylum, but Woking could be converted into an asylum proper. Alternatively, Broadmoor could be extended or used as a temporary site for criminal lunatics.[686] Less than two weeks later Prison Inspector Gover stated that he felt Woking was architecturally sound and had spacious, proportionate rooms that allowed for treatment. He felt it was superior to many county asylums and was pleased that the inmates had single rooms (apart from in the hospital).[687] He believed each lunatic required three times the space of a normal inmate in order to recover, and as such as he saw it Woking was large enough. By making changes to the layout using corrugated-iron the prison could have good sleeping rooms for patients if the place were converted into an asylum, consequently Gover recommended converting the whole place into an asylum under the Broadmoor Act. In his vision it would hold insane persons acquitted of crimes but held at Her Majesty's pleasure due to pronounced insanity.[688] This was very similar to the admissions policy of Broadmoor. Gover, it appears, did not acknowledge or include those who had gone insane in prison, who were guilty-but-insane, or weak-minded. This might have been because he was more concerned with criminals escaping justice, or because he would not accept that individuals went insane in prison.

A "special meeting" was held in March 1886 which was followed by an "ordinary meeting" in which it was agreed that the number of insane men leaving Woking would be seventy-seven and Broadmoor's staff would look to make accommodation for eighty men in their institution.[689] Conversation between the Lunacy Commission and Broadmoor about the move of eighty men from Woking to Broadmoor continued into April, the Secretary of State was aware and approved of the plans being made.[690] The involvement of these different groups made this a political as well as psychiatric and legal problem.

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[685] *LRAB* 30 July 1885: 21.
[686] *LRAB* 21 January 1886: 30.
[687] *LRAB* 30 January 1886: 30B.
[688] *LRAB* 30 January 1886: 30B.
[689] *LRAB* 31 March 1886: 32.
[690] *LRAB* 15 April 1886: 32, 33.

Once the decision had been made to move eighty men to Broadmoor the logistics needed to be confirmed. Woking's male wards would be closed saving an estimated £6,000 a year, and shortly after it was agreed the female side would shut as well.[691] In April 1886 the Broadmoor council questioned whether cost and space could be saved by employing dormitories rather than single bedrooms in the new asylum. It was suggested that this could cut costs from £16,000 to £14,660, although additional considerations cropped up regularly, such as roads, boundary walls and cricket-pitches increasing the expenditure.[692] These suggestions would have meant that cost won over medical consideration and advice from the prison authorities. It was noted that really the asylum needed single rooms. Initially only 153 out of four hundred male inmates in Broadmoor had single rooms and this was "inadequate, due regard being had to the safe custody of the inmates, to their safety from personal violence's at each other's hands, and to the prevention of improper behaviour."[693] It was felt cost cutting could undermine the medical efforts of Broadmoor.

"Broadmoor, as an asylum for criminal lunatics, differs from a county asylum, in being, at the same time, an asylum and a prison" it was argued. "[A]nd, in this account, the wards and the buildings generally require to be constructed with special care, is as not only to ensure the safe custody of the inmates, but also so as to afford the space and general cheerfulness necessary for the satisfactory treatment of insane persons; and hence, the buildings are necessarily somewhat more costly in their construction than those of an ordinary asylum."[694] This juxtaposition of asylum and prison had challenged Woking and Broadmoor since their creations in the 1860s and remained unresolved. Should the individuals in question be primarily "lunatics' or "convicts"? The answer was unclear. When Woking was created for the individuals housed there "convict" was considered to be their primary characteristic, and "lunatic" was secondary. By putting the insane population of Woking under the Lunacy Commission rather than the Prison Commission the decision was being made to put the concerns of mental illness first. This indicates that they saw mental illness as being different from bodily illness.

In 1886, it was decided Woking Prison should close. Less harsh sentencing in the 1880s meant prison numbers were reduced so the other convicts were able to go to other sites as part of a large reshuffle of British prisons. In addition, in the case of Woking, the army

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691 *LRAB* 27 May 1886, September 1886: 36, 39.
692 *LRAB* 22 April 1886; 31 July, 1886; September 1886: 33, 38, 39.
693 LRAB September 1886: 39.
694 *LRAB* 22 April 1886: 34.

needed barracks and many of the commons in the area were taken over for this purpose. Plus, money needed saving across the prison service.[695] Eventually, it was decided that the insane could be housed at Broadmoor. Victorian views on lunacy and insanity had changed.[696] In particular, how the criminal lunatic should be viewed and cared for was under scrutiny.

V. Conclusion: Insanity and Criminality in the Convict Prison

This chapter began with this quote from Lushington in the *LRAB*: "If it is objected that those are criminal lunatics, and not ordinary lunatics, the obvious answer is that we insist on sending criminal lunatics from local prisons to ordinary lunatic asylums, because they are not indistinguishable from ordinary lunatics and are to be treated as such, not as prisoners."[697] This quote highlights the problem faced by prison staff, the prison directors and the Lunacy Commission. Who was a criminal lunatic and how should they be treated?

In this chapter we have seen that medically and legally the inmates at Woking were labelled in many ways, some of which could be conflicting. The labels that applied to them were linguistic rather than scientific or legal. The labels impacted on how a convict was treated and what happened to them afterwards, it has been an oversight on the part of historians to not take note of them. Who counted as a "criminal lunatic" was often arbitrary, as contemporaries were aware. It was dependant not on psychiatric evaluation or the actions of the individual, but on which administrative path was taken to get the individual into an institution; prison or asylum. It was not always clear in court what mental afflictions a person suffered from or when it developed as such it was the first person to "appreciate [the maladies] nature" that dictated whether someone was a criminal lunatic or just a lunatic.[698] As this chapter shows, in court and in prison, the criminal lunatic became confused with "the criminal" as an individual who belonged to a distinct class rather than someone who was medically or legally labelled as no longer responsible for their actions. By opening Woking, the prison authorities brought into question what it meant to be a criminal lunatic and attempts were made to distinguish the "criminal" and the "lunatic" in an individual. Understanding these would allow for appropriate

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[695] Crosby 2003: 95.
[696] See Stevens 2012, Shepherd 2016 and Wallis 2017 for recent studies of Broadmoor.
[697] *LRAB* 22 April 1885: 19. Punctuation added.
[698] Nicholson 1877: 174.

punishment and medical care. Woking was an experiment in categorisation and differentiation.

Initially the need to punish and reform the individual was more important within the prison service. But from the 1870s, the legal status of Woking was questioned, it seemed to be neither a convict prison nor an asylum. Current histories of prisons have seen Woking as just another convict prison, albeit the one with "invalid prison" in the title.[699] But the history of Woking Prison is much more complicated than that. The prison was different in difficult to define ways from other convict prisons and the labels applied to the convicts within it effected their medical treatment and punishment. The story behind Woking's closure has not be revealed before, but by exploring this decade long debate this chapter highlights the complex status of the "criminal lunatic" in the prisons and reveals the different administrative bodies with an interest in the prison service and convicts' health. Despite Woking's closure in 1886, the *BMJ* commented "the history of this Division appears to show that decided success accompanied, or followed, the experiment." The author suggested it might have been better to "leave well alone" rather than close the site.[700] Nevertheless, Woking Prison closed partly due to restructuring of the prison service and a need to save money, but more importantly because the "criminal lunatic" became a legal label for a person rather than a term undefined in law. In the 1860s and 1870s certifying someone as insane had effect of removing the individual's moral responsibility. There was some reluctance to over certify from the prison directors but also from the prison staff who generally were invested in the disciplinary system of the prison.[701] Campbell was definitely in this camp and perhaps goes some way to explain his near obsessive awareness of potential malingerers.

Campbell was put in charge of the invalid prison with no psychiatric experience although he had worked in a number of prisons. His appointment was a reflection of the Prison Directors philosophy for Woking; prison first invalid centre second. The prison directors felt they needed a prison doctor not an asylum doctor prioritising punishment and discipline. By contrast Broadmoor was run by psychiatrists. Towards the end of his book Campbell chose to reflect on his time in the prison service, he claimed all the changes

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699 Priestley 1999.

700 Anon 1886: 1111.

701 Saunders found that prisons were designed to cope with unruly behaviour and it was expected of convicts to be disruptive. The behaviour of a mentally ill individual often had to be quite extreme or violent for them to be certified. 1983:235.

implemented to nationalise the prison service as positive, "humane and enlightened."[702] His one major remaining concern was the habitual criminal or as he called them here "permanent criminals"; men who "appear to be so thoroughly debased and hardened to resist any system of treatment."[703] Although he suggested some deserve sympathy having being "injured for vice and crime from childhood" most men and women who repeatedly offended in his view deserved imprisonment if for no other reason than "justice to the respectable and industrious."[704]

Campbell did not see all criminals as psychiatrically ill. He was astonished by the resistance some people had to the prison system and its reformatory measures. He informed his readers that measures had been taken to separate habitual and casual criminals so that the "worst characters" from the former group did not influence one time offenders.[705] He did lament, however, that the two groups could not logistically be separated into separate buildings to save the young and weak-minded from potential corruption.[706] He called for habitual criminals to be sent to refuges rather than released under police supervision at the end of their sentences, for Campbell the "treatment of these people would be much the same as an ordinary asylum".[707] Perhaps suggesting that he saw habitual criminality as a psychiatric illness, although he felt no sympathy towards them.

The pessimism in psychiatry and the emerging categories of the habitual and hereditary criminals reflected this, as did public concerns about crime and insanity statistics. The categories of criminal and insane criminal made it complicated to decide what to do with an individual especially as there were flexible divisions between those at Broadmoor, Woking or those who stayed at other institutions. Changing attitudes to insanity meant new diagnosis and treatments were being presented regularly, although Campbell did not comment on them. In prisons, more than anywhere else, morality interplayed with insanity making it difficult to disentangle the two. There was an on-going conversation about the mind between "specialist and generalists, scientists and literary writers, theologians, doctors, and philosophers" as well as "economists, imaginative writers, clerics, literary critics, policy-makers, as well as biomedical scientists…"[708] The study of criminal lunatics

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[702] Campbell 1884: 130.
[703] *Ibid*: 130.
[704] *Ibid*: 131.
[705] *Ibid*: 131.
[706] *Ibid*: 132.
[707] *Ibid*: 132–3.
[708] Rylance 2000: 1, 7.

caused contemporaries to reflect on defining the criminal. They found it difficult to prove there were lots of types of criminals, with different physical, mental and moral characteristics. In the press of the 1860s the "criminal class" was perceived as a distinct group of people, but in the prisons it was messy.[709] At best it covered those in prisons or seemingly likely to come to, or return to prison.

It is important to stress once again that the studies Campbell was undertaking were set in an English prison context. They were not underpinned by the same concepts of "the criminal" in Lombroso's work, as has been argued by historian Neil Davie. Davie argues that Campbell undoubtedly "subscribed to the notion of a physical and mental criminal type" and to characteristics of the "born criminal".[710] Similarly, for Davie, Campbell's notes about weighing brains and measuring skulls are exactly like the work of others who he sees as criminologists because of the seemingly scientific and quantitative nature of their work. According to Davie they were criminologists because he sees similarities in their work to Cesare Lombroso. This is a poor definition and it is not the case that they were practising criminal anthropology, or a British variant of it, as Davie argues. I argue that some prison doctors were engaged in trying to scientifically explain criminality, but it was not criminal anthropology. The need to explain criminals was not for academic interest, or to predict future criminals through physiology, but an attempt to improve the prison system and the way they did that was by categorising criminals. The fact that this then fed into what became criminology does not mean the PMOs were engaged in the discipline. It is also unclear that Campbell was engaged in the same kind of rigorous scientific research they were, rather than the post-mortem reports he was obliged to make. By 1884 he had not published anything but was reflecting on a period where much of medicine now included statistics and observation. Campbell was not scientific in the way Davie wants to argue; his language when referring to criminal types is colloquial, expressing commonly held views rather than suggesting a new vanguard in criminology or psychiatry. Instead he seems to have been working under the assumption that less morality equated literally into less brain mass.

New categories of criminal were being created by the prisons which were then played out in new institutions, these were not always successful, and the prisons did not have a

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[709] Mayhew and Binny 1862; Guy 1862; Anon 1865c; Crofton 1868; Anon 1869b; Godfrey *et al.* 2008: 83. Although the language referring to the "criminal class" predates this it became common in the 1860s. Thomas Plint a social reformer in Leeds, for example, had been speaking of the criminal classes for at least a decade, publishing *Crime in England* in 1851.

[710] Davie 2002: 142, 192.

monopoly on the categories they created (as illustrated by the disputes with the Lunacy Commission). Prison seemed too ineffectual, despite being based on "science" so it became necessary to understand the criminal class. Categorisation, statistics and research sought to understand this new class of individuals. The history of criminology started with the kinds of discussions undertaken in the convict prisons and at Woking. The concept of the habitual criminal merged into the hereditary criminals and criminology came to be defined as biological and deterministic. In the next chapter, attention is turned to neurology and histology and the ongoing attempts to understand criminals and criminal lunatics in order to manage the convict population. In the 1870s and 1880s the different types of convicts became more and more blurred and characteristics of a fairly small but unruly group (namely the insane) changed understanding of the whole criminal population. The emerging studies of insanity and mental disorders placed new responsibilities on the PMOs. By the 1920s it had "become an established legal and penological principle that on the grounds of their diminished responsibility mentally defective and insane' offenders should not be subjected to incarceration under the same conditions as ordinary criminals."[711]

[711] Morris and Morris 1963: 192–193.

Chapter 4.

Brains and Scientific Medicine:

Henry Clarke's Research in Wakefield Prison 1876–1886

There is barely a decent head amongst them, they may be taken for inmates of an asylum.[712]

I. Introduction: Advertising for a New Prison Surgeon

"I am a total stranger to Wakefield I should be obliged if you could send me on a post-card the name of a hotel where I might be put up for the two days" wrote Henry Clarke before his interview for the position of PMO for Wakefield Convict Prison and Gaol in 1875.[713] Following a typhoid epidemic in 1874-75 Wakefield needed a new doctor. The previous surgeon, Dr Wood, had retired after seventeen years in the post. He was unofficially held responsible for the poor hygiene and faulty drainage and sewerage in Wakefield Prison that had caused the epidemic. It had taken several local committees, Leeds sanitary inspectors and prison staff four months to find the source and improve the situation.[714] The appointment of a medical officer was usually a lengthy and involved process but due to necessity, in this case the appointment was made relatively quickly. An advert (Figure 4.1) appeared in major papers including *The Times*, medical journals including the *BMJ* and the *Lancet*, and local papers like the *Leeds Mercury* and the *Yorkshire Post*, sometimes more than once.[715]

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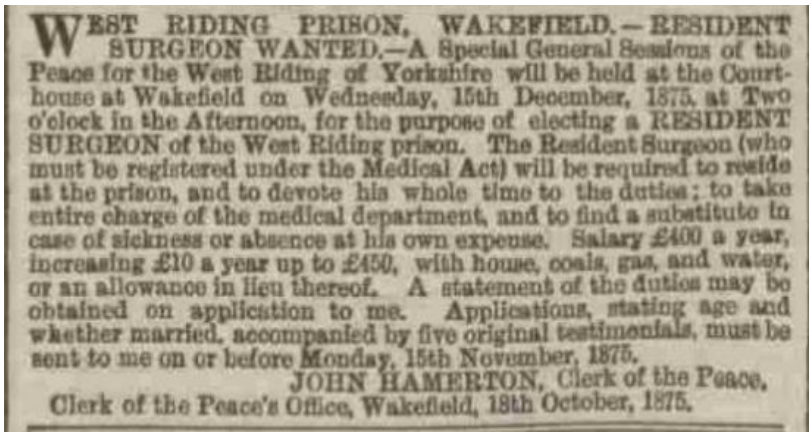
[712] Clapham and Clarke 1876: 152.
[713] *WYAS.*QD1/368–9. *Letters concerning the advertised job.* 1875.
[714] See *WYAS.*QD1/379, 380, 382, 383 and 384.
[715] *WYAS.*QD1/367. *Adverts for the role of Surgeon.* 1875.



WEST RIDING PRISON, WAKEFIELD.—RESIDENT SURGEON WANTED.—A Special General Sessions of the Peace for the West Riding of Yorkshire will be held at the Court-house at Wakefield on Wednesday, 15th December, 1875, at Two o'clock in the Afternoon, for the purpose of electing a RESIDENT SURGEON of the West Riding prison. The Resident Surgeon (who must be registered under the Medical Act) will be required to reside at the prison, and to devote his whole time to the duties; to take entire charge of the medical department, and to find a substitute in case of sickness or absence at his own expense. Salary £400 a year, increasing £10 a year up to £450, with house, coals, gas, and water, or an allowance in lieu thereof. A statement of the duties may be obtained on application to me. Applications, stating age and whether married, accompanied by five original testimonials, must be sent to me on or before Monday, 15th November, 1875.

JOHN HAMERTON, Clerk of the Peace.

Clerk of the Peace's Office, Wakefield, 18th October, 1875.

Figure 4.1 Advert for surgeon at the West Riding Prison

Anon 1875b: 4.

Letters concerning the advertised job soon came pouring in requesting details of the position. The West Yorkshire Archive Service (WYAS) contains two bundles of letters, and a total of 174 of these letters have survived from this initial stage, suggesting it was a desirable position. John Hamerton, a Clerk of the Peace, responded to some of these correspondences but far fewer of his responses have survived.[716] As a job description was not circulated, even within the medical community, inquiries had to be made. [717]

One of the letters of inquiry came from Henry Clarke, who was at the time employed at Guy's Hospital in London. He joined the West Riding House of Correction in Wakefield as chief medical officer and surgeon in 1876, a post he held until 1908. Clarke was a scientifically minded PMO who contributed to the studies of prison health, diet, hereditary studies, craniology, criminal pathology, forensic medicine, histology and psychiatry but has been neglected from the historiography. Clarke's time at Wakefield draws together many of the themes we have seen previously in this thesis, and demonstrates that despite the best efforts of the PMOs, many medical problems remained.

Clarke was appointed as chief PMO at the age of 28, not long out of medical school. The next section begins by looking at his appointment, and what was expected of medical officers by the 1870s. By the late 1870s, as we have seen, several new experiments had been tried in convict prisons, including the "model prison" and new spaces for women, children and the insane. There had been a local prison in Wakefield since 1594 and convict wards since 1847. In the 1870s Wakefield operated like most convict prisons. It is relevant to this thesis not because it was a new variant on convict prisons like the other examples

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716 *WYAS.*QD1/368-9. *Letters Concerning the Advertised Job.* 1875.
717 *WYAS.*QD1/368-9. *Letters Concerning the Advertised Job.* 1875.

discussed, but because of the experimental research undertaken there by Henry Clarke. In order to assess why Clarke might have wanted the position in Wakefield, and why he was appointed, it is useful to look at Wakefield itself, which in the 1870s was both at the centre of the West Riding and a centre for brain research, as will be shown in section II. Section's III and IV then look at Clarke's scientific work, what he learnt about the relationship between insanity and criminality, and how his work related to contemporary debates about crime, hereditary and neurology. Much of Clarke's research was possible because of his access to data, patients to observe and his ability to generate new information through observation. Clarke developed unique techniques to study the criminals in his care, but his work fits into a broader picture of data collection in institutional spaces as will be discussed in section V. The identification and data-management techniques developed in prisons by the likes of Clarke in the experimental era shaped policing going into the twentieth century.

Drawing on the Wakefield county archives papers relating to the prison and Clarke's published papers, this chapter argues that Clarke contributed substantially to scientific medical research—in particular he advanced understanding of the structure of the brain using new and innovative techniques. He was not working in a newly built convict prison, but a local prison adapted for government use.[718] Based in Wakefield, he was part of a large network of researchers, working in institutionalised health care, who were contributing to medico-scientific research on a national and international level.[719] Clarke continued to engage with the ongoing research taking place in English prisons. Including studying disease, nutritional science, hereditary theory and psychiatry as discussed in the previous chapters. Clarke is an interesting example of someone who contributed to the way prisons were run, contributed to medical and psychiatric research, and he also perfectly demonstrates that PMOs were contributing to the study of criminals in way that were more interesting than suggested in existing historiography of criminology, which are limited to theory and dominated by an handful of men.[720] This kind of work grew out of a longer history of data collection and management in the prisons which will be discussed at the end of this chapter, again this section consults primary sources, many of which reside

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[718] WYAS.HQ(L-Wak). West Riding House of Correction [WRHC] Extract from the Wakefield Journal. September 17 1847. "The New convict cells": 3.

[719] Finn 2012: 3.

[720] Jones 1986; Rock 1988: 1994; Wiener 1990; Lynch 2000; Davie 2005; Rafter and Gibson 2006; Becker and Wetzell 2009; Rafter 2009; Gibson 2009; Hayward *et al.* 2010; Knepper and Ystehede 2013; Jalava *et al.* 2015.

in the National Archives as well as the secondary literature on data collection and photography.

II. Wakefield: A Scientific City and a Scientific Medical Officer

After the post was advertised, a shortlist 140 of candidates was compiled and testimonials from five professional references were requested for each applicant.[721] These were mostly brief (a side or two), and sometimes reflected on professional achievements but generally just recommended the candidate for the position. The testimonials range from mere statements on employment suitability to seemingly heartfelt support for candidates. All of the surviving testimonials come from other medical men, which demonstrates that there was support from the medical community for those seeking to take on more civic roles within medical practice (following William Baly's lead).[722] On the basis of these testimonials, letters inviting candidates to attend interviews were sent out.

The shortlisting continued until there were six candidates remaining; James Christie (44, from Glasgow), Henry Clarke (28, House Surgeon at Guys Hospital), Alexander Knight (32 from Keswick), G Longbotham (30, Honorary Surgeon North Riding Infirmary and Medical Officer in Middlesbrough), TD Ransford (26, Resident Medical Officer at Toxeth Park Workhouse and Hospital) and JM Sutton (45, Medical Officer to the Borough of Oldham).[723] Clarke and the other five travelled to Wakefield by rail for interviews but there is no surviving evidence of the procedures or contents of the interviews carried out. We can speculate that Clarke must have been well presented, we know he had a good education, had won an essay prize, and had been accepted into a number of professional bodies, but he had only graduated two years previously so compared to many of his competitors he was inexperienced.[724] Clarke was qualified to work as apothecary, as a physician and as a surgeon—although not legally a necessity, obviously this training was beneficial to candidates. He was both young and at an early stage of his medical career when he was given the job as chief PMO.[725]

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721 *WYAS.*QD1/372. *List of Candidates for Role of Resident Surgeon.* 1875.
722 *WYAS.*QD1/371. *Testimonials for Candidates for the Role of Resident Surgeon. 1875.*
723 *WYAS.*QD1/372. *List of Candidates for Role of Resident Surgeon*. 1875.
724 *WYAS.*QD1/370. *Letters to the Justices of the Peace by Doctors offering themselves as candidates for the post.* 12 November 1875. Clarke's letter was addressed to the magistrates of the West Riding and outlined his medical credentials and told them he was 28 and unmarried.
725 *WYAS.*QD1/372. *List of Candidates for Role of Resident Surgeon.* 1875.

Figure 4.2 Henry Clarke

Date Unknown. Clarke and Wakefield Historical Society. 1977.

Henry Clarke (Figure 4.2) was born in 1848 then moved to train at Guy's Hospital.[726] Clarke completed his medical training in Durham in 1874 and was registered for medical practice on 31 December of that year. In 1874 he also became a member of the RCS of England, a Licentiate of the RCP (London) (1874) and a LSA (1874).[727] Whilst studying at Guy's Hospital Clarke was heavily involved with the medical research community. He belonged to the Pupil's Physical Society who shared research papers and discussed medical cases in their meetings.[728] He delivered his essay "The Ratio between the Pulse and Respiration in Disease" to the society in 1874.[729] Following completion of his degree

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[726] Census 1851. He is listed as "Prizem" 1871–72–73 in the 1878 Medical Directory suggesting he was awarded essay prizes: 396.

[727] Medical Directory 1905: 532.

[728] The Pupils Physical Society ran from 1830 to 1966. It overlapped with the Physical Society (1771–1851). The Pupils' Society was just for students at Guy's hospital and was a space to discuss medical and surgical questions, interesting cases and present papers. Some events may have also included the staff. *Kings College London Archive Catalogue: The Pupils Physical Society.*

[729] Clarke's paper reviewed the different rates of the pulse and respiration in a number of diseases including enteric fever, typhus, relapsing fever, intermittent fever, acute rheumatism, acute bronchitis, and simple milenae pleurisy to help diagnose diseases. Clarke believed the change in ratio was "a greater value than any other symptom" when it came to diagnosis. He apologised for the amount of statistics in his presentation but promised his audience that there was more exciting research to follow. Other papers appeared that academic year covered a range of topics including "Electricity as a remedial agent" by Edmund Day, "Vaccination" by Charles Reeds and "The Turkish baths, its prophylates and therapeutic properties by Gibbon. "Guy's Medical School Pupils Physical Society. Essays Delivered to Sessions 1873-1874." *Kings College London Archives and Special Collections.* G/S7/42

Clarke spent two years working at Guy's Hospital in London as a house surgeon before he moved to Wakefield and took up the position of the Surgeon of the West Riding House of Correction on 3 January 1876.[730] He received his MD from Durham in 1897 whilst still at the Prison.[731]

Clarke's new position was announced when an "order of appointment" was issued at a "Special General Session of the Peace of our Lady the Queen in Wakefield" on Wednesday 15 December 1875.[732] Clarke then lived on site, later joined by his wife Louisa and their children Gladys Traverner Clarke (born 1870) and Henry M. Clarke (born 1879). In 1881 they also had two live in servants.[733] Nothing survives to tell us what it was like for the children to grow up in the prison grounds, but the Clarke family seem to have been quite involved in the local community attending Westgate Chapel in Wakefield.[734] Local prisons like Wakefield did not have to have live in surgeons. Local prisons and the earliest convict prisons (Millbank and Parkhurst) often had a visiting doctor who was paid to come to the prison a few days a week to check on inmates' health. With Pentonville this system was extended to convict prisons, as we saw in chapter 2, to have full-time, on-hand staff.

The decision-making process which resulted in Clarke's instatement has not survived in the archives but the careful way he presented himself in writing and presumably in person must have helped. Similarly, he probably had good references and the reputation of Guy's Hospital behind him to have got shortlisted. McConville reports that in the case of Millbank most candidates were recommended by their hospitals, usually from around London, and if found favourable added to a list to await an appointment. They usually began as an assistant surgeon, a post they would hold for up to five years before being promoted to surgeon. PMOs could not have their own private practice.[735] In 1878 it was also suggested by the Royal Commission that all positions within the PMO should be open for competition and assistant surgeons had to serve a probation period.[736] In the 1870's the Justices for the West Riding encouraged research. They were the same justices that

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730 When Clarke joined Wakefield Prison in 1876 Captain Armatage was Governor, Mr Ulyatt his deputy, and Rev Richard Bullock the chaplain with Rev. Edward Parr as his assistant. Rev Charles Eyre was the Roman Catholic chaplain (approved 1866). Mr W. Robson (soon to be taken over by Mr Thomas Rowlandson Whiteley) was trade manager, Mr Hy. Oxley, steward, and Miss GE Irwin, matron; Turner 1904: 251.

731 Medical Directory 1908: 520.

732 Clarke and Wakefield Historical Society 1977.

733 1881 Census.

734 Clarke and Wakefield Historical Society 1977.

735 McConville 1981: 450–451.

736 *Ibid*: 453.

oversaw the Wakefield based West Riding Lunatic Asylum which, as Michael Finn has argued, was the centre for brain research in the 1860s and 1870s.[737]

The city of Wakefield, despite being small and provincial was a medico-scientific city at a time when institutions overseen by government, local council and visiting justices were becoming less autonomous. Instead of becoming more restricted during the 1860s and 1870s Wakefield enjoyed a phase of rapid research and association with brain science and anti-vivisection movements made West Yorkshire "virtually the centre of the scientific world."[738] The central site for this was the West Riding Lunatic Asylum. It was where David Ferrier carried out his experiments on animals relating to epilepsy which caused such a stir in 1873.[739] It was the home of the influential journal *The West Riding Asylum Report* and its proponent James Crichton-Brown, and was the place of work or research visits for a number of influential psychiatrists in the period.

Figure 4.3 Wakefield Prison c.1916

Blanck 2014. Images uploaded by David Studdard July 2014.

At a time when asylums were becoming pessimistic about their ability to cure the insane, and prisons were becoming more uniform and managed by the prison department, the Justices in Wakefield seemed to encourage research, unlike many other cities. Clarke joined the PMS just before the nationalisation of the Service (he started just a few months before the proposed plans were read out in parliament). Clarke saw and adapted to the changing policies whilst caring for the health of staff and prisoners alike, as well as holding a number of other medical posts. The nature of Wakefield's prison (Figure 4.3) meant the

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[737] Finn 2012a.
[738] *Ibid*: 3.
[739] Ferrier 1873a: 457; Ferrier 1873b: 30–96.

new PMO would cover both the convict prison and the local prison. They shared a governor so both parts of the prison were managed in a similar way. Wakefield was one of the earliest government convict prisons, modelled on Pentonville but attached to the existing gaol, it provided for a range of penal sentences to both men and women. "In consequence of the success of the system of discipline carried out at Pentonville Prison a large prison after the same model was erected at Wakefield and separate confinement was carried out there, with even fewer mental cases than occurred to Pentonville Prison" reflected Prison Inspector, Robert Gover in 1895.[740]

Recently some attention has been paid by historians to the importance of the West Riding Lunatic Asylum but the prison in Wakefield is under studied.[741] There are two brief histories of the prison, the first was *The Annals of Wakefield House of Correction for Three Hundred years* by J. Horsforth Turner and was published in 1904. The only significant update was *Here We Go Round the Mulberry Bush,* by then prison governor Robert S. Duncan in 1994.[742] There is not sufficient space here to update and add to these histories extensively. Instead I will highlight some of the most important characteristics of the prison set up in relation to prison medicine and health.

Between 1837 and 1840 plans had been drawn up by the West Riding Justices to enlarge or rebuild the House of Correction on Back Lane in Wakefield. They decided it would be more economical to build a new prison on a new site but also continue to use some of the old prison.[743] Four wings were planned for the new prison; two of these were finished by June 1845 and 300 prisoners moved in during October that year. The "new prison" was not finished until 1847 and the old prison was maintained for additional accommodation. In September 1847 it was agreed by the Magistrates of the West Riding and the Secretary of State for the Home Department that cells would be rented by the government to hold state convicts.[744] By the end of the rebuild, Wakefield could hold 412 convicts; 320 long term prisoners in the new building, 60 boys in a separate building, 250 short term prisoners in the old building, 32 in a small building for the reception of prisoners (receiving ward), 50 debtors, and 106 women making a total of nearly 1300 criminals within the prison

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740 Gover 1895: 909.

741 See Neve and Turner 1995; Pearce 2003; Finn 2012a; Wallis 2017b The asylum is also referred to in general histories of asylums and psychiatry, for example in Bynum 1985; Oppenheim 1991; Scull 2011.

742 The title is a reference to the Mulberry bush in the grounds of the prison which is said to have inspired the nursery rhyme. Overtown.org. 1997–2017.

743 Brodie *et al.* 2002: 99, 107–108.

744 *Ibid*: 1–3.

walls.[745] It is unnecessary to go into lengthy detail about the construction of the new prison but I will make a few points to highlight the working conditions of Clarke and the health concerns of the governor and Justices. The convict wings at Wakefield were designed to be ultra-modern, as at Pentonville, each cell was 13ft by 7ft with a stone floor and sparse furnishings; this was to encourage contemplation and repentance which the separate system hoped to instil just as Jebb had planned in 1842.[746] The new cells at Wakefield were an update on Pentonville in some respects, and included a ventilation system which was temperature adjustable and mechanical signposts which sprung out of the door when an inmate rang for a guard's attention, thereby immediately alerting them to the caller.[747]

Of great concern to the Justices of Wakefield was sanitation. There were outbreaks of disease in Wakefield, including an outbreak of typhoid in 1874–75 which had occurred despite careful planning and extensive funding channelled into installing the latest ventilation and sewage systems into the prison; these were updated again, at great expense, in 1875–76. In addition, chemicals and white-wash were employed to keep disease at a minimum, and inmates got a warm bath every two weeks. Bathing all the prisoners took about three hours and the prisoners were observed by officers to check that everyone actually bathed.[748] In 1864 Dr Milner, the "convict department surgeon", had reported that the water supply into the prison was impure and this was responsible for poor health and later that same year a new drying house was purchased and a second built.[749] Clarke reported that in 1878 there were no cases of typhoid or zymotic disease.[750]

The first prison hospital was built in 1838 on the north side of the old house of correction, and was retained when the new prison was constructed to its north. The hospital was T-shaped and had separate accommodation for male and female patients; it was not dissimilar to hospitals previously described in this thesis. By 1875 the men's hospital had four cells, two wards, a surgery and dispensary on the ground floor and six wards on the first floor. The women's hospital had four cells and three wards. Despite the best efforts of William Baly, his successors in the prison system and other institutions such as

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745 *WYAS.*HQ(L-Wak). *West Riding House of Correction [WRHC] Extract from the Wakefield Journal*. September 17 1847. "The New convict cells": 3.
746 Jebb 1844.
747 *WYAS.*HQ(L-Wak). *West Riding House of Correction [WRHC] Extract from the Wakefield Journal*. September 17 1847. "The New convict cells": 1–2.
748 *WYAS.*HQ(L-Wak). *West Riding House of Correction [WRHC] Extract from the Wakefield Journal*. September 17 1847. "The New convict cells": 2–3.
749 Turner 1904: 248.
750 Anon 1878: 3.

hospitals, asylums and the workhouses epidemic disease continued to be a problem in populated institutions as well as in urban areas.

Similarly, the question of diet remained a constant problem for PMOs, not fully resolved by the efforts of Guy, Rendle and Bradley as we saw in chapter 2. In May 1862 a "reduced diet [was] (experimentally) to be tried for six months."[751] It is unclear if this was related to health, criminality, punishment or a cost cutting measure, but it was probably a response to contemporary debate. In 1864 a new bake house was erected in Wakefield Prison to adapt to the new dietary policies.[752] This bake house started to make modern, aerated bread in 1866.[753] The doctors' ability to tend to inmates with diet was restricted further after 1878 when the legal changes that came with nationalisation standardised prison diet across the country.

The appointment of Clarke allowed for some changes in the medical service at Wakefield. The Inspector of Prisons advised that the medical officer should live on site so his whole time could be dedicated to his work (although the medical directories suggest Clarke also busied himself with other roles).[754] Following the Inspector's advice, Clarke was built a large house in the grounds of the prison at the cost of £2,250 (there were no houses on prison site previously). This remained Clarke's home until he retired in 1908 following serious illness.[755]

When Clarke arrived in Wakefield he had to re-establish a network of medical researchers around him. Primarily he found other medical researchers working in the asylum. Within months of his appointment Clarke published in the *West Riding Asylum Reports* and *Brain.* Clarke quickly became acquainted with James Crichton-Browne who was the director of the asylum and published the *Reports.* Clarke wrote that Crichton-Brown had advised him and William Clapham, also from the asylum, when they collaborated on a paper so they clearly shared ideas.[756] As well as working with Clapham, Clarke would later collaborate with William Bevan-Lewis, also working at the asylum, suggesting collaboration between the institutions. It is likely that Clarke also knew Herbert Coddington Major who took over as director from Crichton-Browne as he was managing the asylum during some of the later

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[751] Turner 1904: 221.
[752] *Ibid*: 223.
[753] *Ibid*: 225.
[754] Anon 1875c: 3.
[755] Turner 1904: 247. On his retirement Clarke was presented with a set of entree dishes, a stand and cake knife. He was succeeded by Dr J Benson Cooke.
[756] Clarke and Clapham 1876: 152.

collaborations. *Brain* had been founded in April that 1878 by David Ferrier, James Crichton-Browne and John Hughling Jackson and focused on neuroscience (and was the first of its type).[757] Ferrier presented Clarke and Bevan-Lewis's co-authored paper to the Royal Society on their behalf, so clearly thought highly of their research.[758] By working closely with the asylum, prison staff, like Henry Clarke, made some important observations and discoveries which contributed to scientific-medico research.

As well as these famous names, Clarke was involved in medical institutions across Wakefield including the Asylum, West Riding Female Industrial Home, Evelina Hospital for Children, the Resident Obstetric House, and West Riding Male Industrial Home. This created a wide medical network in the local area.[759] In addition to his many professional roles Clarke was a Member of the Medical Microscopic Society by 1878.[760] In 1879 he became a member of the Medico-Psychological Association.[761] Given the breadth of his knowledge and the references he made to European physiologists and medicines, he was clearly well informed in contemporary medicine. He actively engaged with fashionable topics and seems to have become an unofficial government advisor suggesting recognition outside of his expertise in prison medicine. In 1894, Clarke was the only doctor asked to provide evidence for the Habitual Criminal Investigation and he advised finger prints would be more reliable than measurements.[762] Clarke's list of societies extended beyond his medical interests; he had become a Fellow of the Statistical Society and, like Francis Galton, he was a Fellow of the Meteorological Society by 1878 and published in their journal.[763] Clarke was also an illustrator. His collection of (at least) ninety-six drawings of Wakefield were bound in Henry Clarkson's copy of *Memories of Merry Wakefield* it has been suggested as personal, private illustrations to the text.[764] The skills he developed in illustration were useful in his research through microscopic observation and illustration

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[757] Finn 2012a: 165-193.

[758] Finn 2012a: 156-7.

[759] Although the asylum does not appear in any of the medical directories so it was not an appointed post. Medical Directory 1878: 396; Medical Directory 1898: 645.

[760] Medical Directory 1878: 396.

[761] Medical Directory 1880: 424.

[762] See section V for more on fingerprinting and biometrics. TNA.PCOM7/248. *Habitual Criminal: Report of the 1894 Departmental Committee.* 1894–1895: 40.

[763] Medical Directory 1878: 396.

[764] (Second edition 1889) The original drawings were probably never published but given to Clarke's daughter, Gladys, who then gave it to the Wakefield Corporation, they then went to the Wakefield Metropolitan District Council before being reproduced by the Wakefield Historical Society in 1977. The pictures probably date from the 1890's. Clarke and Wakefield Historical Society 1977.

as we shall see in section IV. His interests in visual media was evident in his scientific work.

III. Collecting Case Studies: Evidence for Inheritance in Criminals

Elizabeth W was a thirty-five-year-old married convict who had been committed to Wakefield on 31 December 1877. Elizabeth was mother to three children, two of whom died in infancy, one from fits and the other from "water on the brain". This was taken as significant evidence for weaknesses within the family, or at least problems inherited from Elizabeth herself. Elizabeth reported having good health throughout her life but on 20 February 1878, less than two months after she started her time at Wakefield, she began suffering from pain in her neck. Suddenly, whilst picking oakum, her right arm and leg went numb and she was unable to speak.[765]

Clarke published Elizabeth's story in *Journal of Mental Science* under the title "Embolism of the Cerebral Arteries – Softening of the Pons Varolii" in 1879.[766] This was published as clinical notes, so perhaps indicating the sort of detail recorded by Clarke and his colleagues on a day to day basis. In this paper he gave his readers an example of his research and findings. After Elizabeth lost her ability to speak Clarke commented that she was seen within minutes of the attack—demonstrating the immediate nature of medical care available in the prison, but also noting that despite medical care, over the following days she suffered from recurring bouts and recoveries of hemiplegia and aphasia all monitored in the hospital.[767] Clarke's report records changes in temperature, food intake and condition of the body, bowels and pupils. Clarke tested for syphilis and found no evidence of the disease, he reported fits but seemed frustrated at the lack of an obvious cause (or solution).[768] Elizabeth passed into a coma and died on 10 April 1878.

As with most prison deaths, a post-mortem was carried out, Elizabeth's was on the afternoon she died. The focus was on the condition of the brain, which, like all the organs, was weighed. Clarke described the pons varolii as having the "greatest alteration" and

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765 Clarke 1879: 617.

766 *Ibid*: 617–622. Pons Varolii: A band of nerves fibres on the ventral surface of the brainstem that links the medula oblonsta and the cerebellum within upper portions of the brain. [The Free Dictionary.com: Pons Varolii. Accessed 8/11/2013].

767 *Ibid*: 618. Hemiplegia is numbness or paralysis in half the body, and aphasia is a communication disorder.

768 *Ibid*: 618–619.

studied this area under a microscope. The use of the microscope in this way contributed to the new studies of medical (rather than plant) histology. It was only in 1861 that Max Schltze had defined the cell structure, and Clarke was building on this research.[769] Clarke concluded that "apart from the interest due to nervous affections generally, when occurring among criminals, the above case was thought to be worth recording, as a good example of an uncommon form of cerebral disease."[770] Publishing this article suggests that Clarke felt that there was, or should be, a general interest in the histology of nervous disease amongst medical researchers and readers of the *Journal of Mental Science.* Clarke used a variety of tools in his research, alongside the microscope he used a conformateur which is discussed in the next section. He was also an early adopter of the ophthalmoscope and lamented that he did not use one in Elizabeth's case.[771] This instrument was barely used in the UK, in 1871 Thomas Clifford Allbutt complained that he "could count upon the fingers of one hand" the number of physicians working with the ophthalmoscope in England.[772] Clarke's mention of it shows he was aware of cutting edge research and was drawing this to the attention of his readers. The ophthalmoscope finally gained some popularity by the end of the century being the only tool which could look at the brain without a post-mortem.[773]

In the case of Elizabeth W, the use of ophthalmoscopes and microscopes may have been new for medicine but discussions about alcohol, epilepsy and crime were not. Clarke may have felt inclined to comment following the introduction of the Habitual Drunkards Act in 1879. This created a register of known drunks or alcoholics and issued details about individuals to ale houses and pubs which were then obliged to refuse service to the individuals on the lists. Herbert Major at the West Riding Asylum was very interested in alcohol, and reported in March 1878 that in 1876 17.84% of admissions to the asylum were caused by excessive alcohol.[774] As a result of Major and Clarke's research, coupled with later work done by Bevan-Lewis, by 1884 asylum patients were no longer allowed a beer allowance.[775]

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[769] Encyclopædia Britannica 2002: "Max Schultze."
[770] Clarke 1879: 622.
[771] Invented by Hermann Von Helmholtz in 1850 in Germany (although may have been Charles Babbage in 1847) to look at the retina – this can reveal syphilis, leukaemia and diabetes. It also reveals the optic disc making it the only way to look at cerebral matter without opening the brain.
[772] Finn 2012b. See Hartridge 1907 for instructions of use.
[773] Hartridge 1907 (Earlier editions available).
[774] Todd and Ashworth 1985: 157.
[775] Todd and Ashworth 1985: 158.

This article hints at the anatomical training Clarke had received at Guy's Hospital and the importance he placed on post-mortem examinations. It was the post-mortem which revealed to Clarke the important changes in Elizabeth's brain. This kind of study was part of the emergence of criminal pathology—understanding what made a criminal through pathological study. Contemporary trends in psychiatry lent towards understanding insanity through the brain, similarly criminal pathology understood the criminal through their body. However, as has been repeatedly stressed, this is not the same as Lombroso's criminal anthropology; the criminal mind was not written into the physiology of the individual. Instead it was believed that small changes in the brains make up combined with other factors such as environment affected the life of the criminal, although did not dictate their actions, choices or innate "criminal nature".

Clarke collected information on his patients, beyond the call of duty. He was engaged with up-to-date science and used modern technologies. He wanted to know if there was a link between inherited traits and physical causes and responses. He looked at individuals and groups or collectives of criminals in order to understand their health. Clarke utilised data collection, statistics and statistical analysis, and observation, drawing on techniques developing out of mid-late nineteenth century medicine.[776] He believed in the value of pathology and observation and most importantly believed that the brain, not the mind, was the key to understanding people. His writing presented observable fact, and he rarely speculated on his results or drew conclusions in an attempt to interpret or explain his findings to his reader.

The institutions in which Clarke worked were greatly influenced by psychological study, but Clarke seemed wary of attempting to understand the complexity of the mind, instead focusing his research on the brain. He also touched on other tangible and measurable factors such as diet, alcohol consumption and broader health care. Clarke was, as we shall see, interested in observable, quantifiable science and only used data and statistics to illustrate his papers. This section and section IV use Clarke's published works to explore how he practised science and medicine in the prison to argue that Clarke was an active researcher going beyond the need to keep his patients alive and balance punishment and health. He was trying to explain criminal nature through medico-scientific research.

In January 1880, Clarke's article "on hereditary crime in epileptic criminals" was published in *Brain*, it was an attempt to relate criminality with hereditary diseases. In the

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[776] Bynum 1994: 218–219.

nineteenth century, epilepsy was classified as a psychiatric disorder linked to moral failings or excessive masturbation.[777] Maudsley had argued in 1873 that epilepsy should always be considered as a causal factor in aggressive crimes like homicide, suicide or arson. He felt that sudden violent crimes committed in "blind fury" were "frequently due to an epileptic process."[778] Epilepsy was in the consciousness of those trying to explain criminality. In his article Clarke set about exploring the relationship between hereditary alcoholism and epilepsy in criminal men and women. Before delving into substantial analysis of the data he collected, Clarke reminded his readers that few could deny the "probable existence of a distinct criminal neurosis."[779] Furthermore, he argued that insanity and criminality were closely related even if some did not want to go as far as to say "distinctly correlated."[780] With this in mind, Clarke assessed the correlations between epilepsy and criminality, epilepsy and drunkenness, epilepsy and drunken family, and drunkenness or drunken family and crime. He found that the difference in the number of drunken ancestors between epileptic and non-epileptic criminals was fewer than anticipated. "There is reason, however, to believe that a hereditary history of alcoholism is more common, not only in epileptic but in ordinary prisoners than it is in non-criminal epileptics."[781]

The American doctor M. G. Echeverria tells us that Clarke observed 119 epileptic prisoners at Wakefield Gaol. Of those with idiopathic epilepsy 50.5% had family histories of drinking as did 30.7% of those with traumatic epilepsy; together these made a net total of 46.2%. Similarly, 73.1% of the former group and 34.6% of the later had "direct hereditary history of fits, insanity, drink or crime."[782] In an article on alcohol Echeverria drew on Clarke's observation that epileptics were more likely to be drunkards than non-epileptics. Clarke's data showed that there was an increased likelihood of crime if someone in the family had hereditary alcoholism, especially if this alcoholism was inherited from the father.[783] Clarke called this hereditary alcoholism a type of "hereditary neurosis". He identified two key types of hereditary neurosis which he called "direct heredity" which came from the mother or father, and "collateral heredity" which was less clear and was

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[777] Szasz 1998: 47.
[778] Gunn 1969: 4.
[779] Clarke 1880: 491.
[780] *Ibid*: 491.
[781] *Ibid*: 501.
[782] Echeverria 1881: 489–519. Echeverria was the Physician-in-Chief to the Hospital for epileptics and paralytics and to the City Asylum for the Insane in New York and published extensively, usually but not exclusively in American psychiatry journals.
[783] *Ibid*: 502.

"confined mostly to brothers, sisters, uncles, aunts and first cousins."[784] Clarke found that epilepsy was more frequently found in the mother than the father, and to have both parents suffering was more likely for women. In the case of alcoholism the exact opposite held true.[785] He also believed epilepsy was often inherited from fathers connected to drunkenness but felt "the female sex has a specially marked tendency to receive the taint from the parents."[786] Clarke commented briefly on the effects of class on epilepsy and criminality but moved quickly from this social question after acknowledging briefly that increased likelihood of injuries and alcohol consumptions may impact the poor—either causing an accident which would encourage epileptic fits or by causing poverty and thus a need to commit crime.[787] He also believed a number of epileptics became criminal through necessity rather than heritage. Clarke gave his readers extensive, careful studies of family histories and habits and used case studies to illustrate his points. This represented a departure from his early studies as this was much more descriptive. He did, however stick to his tested method of collecting data and numbers, working out statistics and seeking correlations.

In 1906 William Bevan-Lewis at the West Riding Lunatic Asylum wrote that "according to Dr Henry Clarke, of H.M. Prison at Wakefield, taking all criminals together, 43.5 per cent, have drunken fathers, but if the epileptic criminal only be considered, 67 per cent, have a definite and certain history of paternal intemperance, whilst 18.2 per cent further were somewhat doubtful, but almost certainly intemperate, making if included a gross total of 85.2 per cent. The epileptic criminal, you observe, as the epileptic idiot and imbecile, reveals the potency of paternal alcoholism."[788] The concern with epilepsy as a form of insanity continued into the twentieth century and was of great importance to prison and asylum staff as part of wider debates about who, the prisons or the asylums, should take responsibility for the criminal lunatics or criminal weak-minded.[789] These groups often included epileptics as the disease greatly limited work prospects and consequently may have left to petty theft and associated crimes.

A famous study of hereditary was published by American sociologist Richard Dugdale in 1877. Her claimed to trace the hereditary failings of one American family, the Jukes.

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[784] *Ibid*: 502.
[785] *Ibid*: 505.
[786] *Ibid*: 506, 515.
[787] *Ibid*: 516.
[788] Beven-Lewis 1906: 213.
[789] Hardy 1995: 73.

Dugdale had found six members of the same family in one gaol. He subsequently traced 834 members of the family finding links between crime, pauperism and alcoholism. Unlike many Americans Dugdale was not a degeneration theorist but he did believe that hereditary influences, combined with environment, affected the Juke family.[790] This was not dissimilar to Clarke's work. It is worth noting that degeneration theory was very popular in the USA and suited those arguing about race.[791] Clarke was not a fervent degenerationist, but he would have been aware of David Ferrier's 1873 studies on epilepsy.[792] the Habitual Criminal Act of 1869, the publication of Francis Galton's *Hereditary Genius* (1869) and the new work coming from America on alcohol and heredity. Ferrier also looked at epilepsy and in 1873 following experiments at the West Riding Asylum, he published in the *Report* that he was able to reproduce epileptic convulsions experimentally. He also found precise movements of muscles and muscle groups in animals during his experiments. Galton's *Hereditary Genius* had been published in 1869 and arguably set the stage for statistical study of human traits. Galton and other statistical studies like Clarke's, became the forerunners of *Biometrica* founded by Karl Pearson and W. F. R. Welson in 1901, and Charles Goring's *The Criminal* in 1913.[793] Clarke's interest in alcohol and epilepsy was part of a bigger movement which is perhaps why it passed more unnoticed in the historiography. Similarly, hereditary theories like Clarke's were over shadowed in the contemporary press and in the historiography by the likes of Galton and degeneration theorists. Hereditary in relation to crime has been discussed in relation to international "Fathers" of criminology, ignoring less famous names.

Clarke's hereditary theories were different from the degeneration or social Darwinist theories prevalent at this time. Benedict-Augustin Moral (1809–73) had previously sought laws of nature for comparative physiology and pathology.[794] He published his underlying degeneration theory *Traite des Degenerescences Physiques Intellectuelles et Morals de l'Espece Humaine"* (1857) and *Traites des Maladies Mentales* (1860). In these he outlined two laws of degeneration theory; the law of double fertilisation (i.e. the impact of heredity)

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[790] Carlson 1895: 132–133.
[791] *Ibid*: 135.
[792] Ferrier 1873; Young 1970: 238
[793] A less well known example is Alice Lee who published "Mathematical contributions to the evolution of man" in *Philosophical Transactions*, 1901—this paper, based on her PhD, disproved the link between cranial capacity and intelligence by demonstrating her examiner and supervisor had small brain spans but high intelligence.
[794] Carlson 1985: 121.

and the law of progressivity.[795] Historian Eric Carlson attributes to Morel the idea of "hereditary insanity."[796] Morel considered alcoholism to be a degenerative state. This was seen as a scientific contribution to the growing contemporary belief in "dipsomania" — the idea that drunkenness was a mania or illness not a choice.[797] Morel and degeneration studies were promoted by Francis Galton. Who had argued that metal traits were more nature than nurture.[798] Clarke does not seem to have engaged with the eugenics movement. It is possible he was aware of some of the potential failings of biological explanations for degeneration including lack of physical evidence and inconsistency in supposed influencing environmental factors on moral faculties.[799] He does not seem to have been convinced by the Darwinian narrative of criminality or by the media narrative about consistent criminal class(es) even if he did believe in hereditary in the case of epilepsy and criminality.[800]

An important difference in Clarke's work from more famous hereditary theorists is that he was not aiming for unifying theories, and was not attempting to explain all criminals or trace hereditary criminality. He made no arguments about hereditary throw backs or reappearance of old atavistic traits and did not attempt to suggest any social policy. His aims were solely related understanding the brain and the body. Clarke found evidence of hereditary in criminals but did not reject environmental explanations for crime. As David Churchill argues, there were also "scientific criminals" which did not fit the degenerative framework and Clarke was aware of this. Churchill identifies professional criminals and notes security measures were implemented to defend against clever crimes.[801] More work should be done to include these types of criminals into our understanding of how the Victorians understood criminals and criminology and how these people fitted into the reformatory prison system. Where crime could be explained through degeneration or criminal-genius Clarke thought there might be physiological or hereditary causes for criminality in some criminals.[802] If this were true, it would be found in the brain so that is where Clarke looked.

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[795] *Ibid*: 122.
[796] *Ibid*: 129.
[797] *Ibid*: 130.
[798] See OBND, 'Galton, Sir Francis'.
[799] Jalava *et al.* 2015: 33.
[800] *Ibid*: 33.
[801] Churchill 2015.
[802] In an evolutionary not degeneration sense.

IV. Craniometry and Neurology: Studying Heads and Brains in the West Riding Prison and Asylum

Madame Tussauds' "Baker's Street Bazaar" brought nineteenth-century visitors, willing to pay the sixpence entrance fee, face to face with the famous faces of the day. These ranged from leading statesmen and deceased leaders (like Louis XVI) to celebrities from the news, including the death-masks of the century's most notorious murderers who could be, and still are, found in the "chamber of horrors".[803] Not all death-masks were made for entertainment; moulds of criminal's skulls were made as part of scientific studies to ascertain what made criminal's criminal. Originally this related to phrenology or physiology, but the scientific study of the head continued long after phrenology was largely abandoned. In 1879 the *Journal of Mental Science* lamented that the Home Secretary, Richard Cross, did not know the difference between these two types of wax model after Cross had instructed his secretary to refuse any requests for permission to make a cast of a murderer's head, even for scientific purposes.[804]

"In spite of the many uncertainties of the present day, we thought one thing at least to be certain, namely, that there was a greatly increased recognition of the importance of the development of the brain, whether in relation to crime or mental defect. But even this belief proved to be an illusion" claimed the *JMS*.[805] Arguing "At a time when a really scientific use is made of crania and casts of heads, the government decides that the supply shall be cut off from one source at least."[806] Why, the journal asked, were skull-casts not being made compulsory rather than being discontinued? "We sincerely trust that this embargo upon so legitimate a use of the scientific materials at our disposal in prisons will be removed, and that the study of criminal pathology will not be prohibited by so un-called for a prohibition" they wrote.[807] They advised their readers that if they wanted to know how much interesting work could be done in criminal pathology (or indeed pathology of the brain more generally) they should see "The Cranial Outline of the Insane and Criminal"

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[803] Encyclopaedia Britannica 2016: "Marie Tussaud."
[804] Anon 1879b: 693-694.
[805] *Ibid*: 693–4.
[806] *Ibid*: 694.
[807] *Ibid*: 694.

published in *West Riding Asylum Reports* in 1876 by Henry Clarke from Wakefield Prison and William Crochley Sampson Clapham of the West Riding Asylum.[808]

Criminal pathology was a new term when Clarke and Clapham were writing so they were at the beginning of this new field of research. Statistics analysis of criminals was intrinsic to the discipline of criminal pathology, as it was for Clarke in his attempts to ascertain if there was something pathologically wrong with criminals, or at least some criminals. In this sense crime could be seen as a moral disease or abnormality (in repeat offenders) and evidence of this could be found in the pathology of criminals. By understanding the pathological causes of repeat offending, a cure or appropriate response could be developed.[809] Clarke and Clapham believed that illness had a physical cause, so set about studying the physical make up of criminals, both alive and dead. They collected large bodies of data in order to draw their conclusions. Importantly, "the shape and size of the head have always been considered as bearing a relation to the degree of intelligence of the individual" Clapham and Clarke told their readers.[810] But this, they argued, was incorrect. Contra to popular belief, and phrenological tradition, heavy brains did not mean great intelligence.[811] Likewise, it was wrong to believe, as many did, that the insane or criminals had asymmetric heads.[812] The visitors to Madame Tussaud's would have agreed with the eminent psychiatrist Dr Wilks that amongst the criminal's heads "there is barely a decent head amongst them, *they may be taken for inmates of an asylum"*[813] This was representative of the general scientific, medical and even popular view that Clarke and Clapham were trying to argue against.

They wrote, rather surprisingly, that they found very few abnormalities in the insane skulls compared to sane, law abiding people. "In fact, their skulls were not nearly so twisted as their wits."[814] Indeed they believed that insane skulls "compare favourably" to that of a sane person.[815] There are both symmetrical and asymmetrical skulls in the sane and insane.[816] Major at the West Riding Asylum also argued that the brains and skulls of those

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[808] Clapham worked at West Riding Asylum and was known for weighing and measuring brains and cranium and published regularly. He later managed a mental disease department in Sheffield. Anon 1897b: 328; Mould 1923: 592–593.
[809] Anon 1896: 7.
[810] Clapham and Clarke 1876: 150.
[811] *Ibid*: 150.
[812] As we have seen criminality and insanity were often seen as nearly synonymous.
[813] Clapham and Clarke 1876: 152.
[814] *Ibid*: 152.
[815] *Ibid*: 152.
[816] *Ibid*: 152.

who were perceived as normal people were also very varied so the idea might not have been completely new, but it was the first time it was argued for, and proved in this way.[817] In order to make these claims they had to measure the heads of 1,300 insane patients, 500 criminals, and an unspecified number of sane individuals outside the institutions. On the recommendation of Crichton-Browne, the Director of the West Riding Lunatic Asylum, Clarke and Clapham had borrowed a "conformateur" (Figure 4.4) from "Mr Carruthers of Wakefield" for the task.[818] A conformateur was a tool invented in 1852 by Frenchman Allie-Maillard and used by hat makers to measure the size of the clients head and thus adapt hats to fit perfectly. By seeking alternatives to conventional medical tools they were able to fulfil their desire to collect perfect, detailed data beyond what had come before.

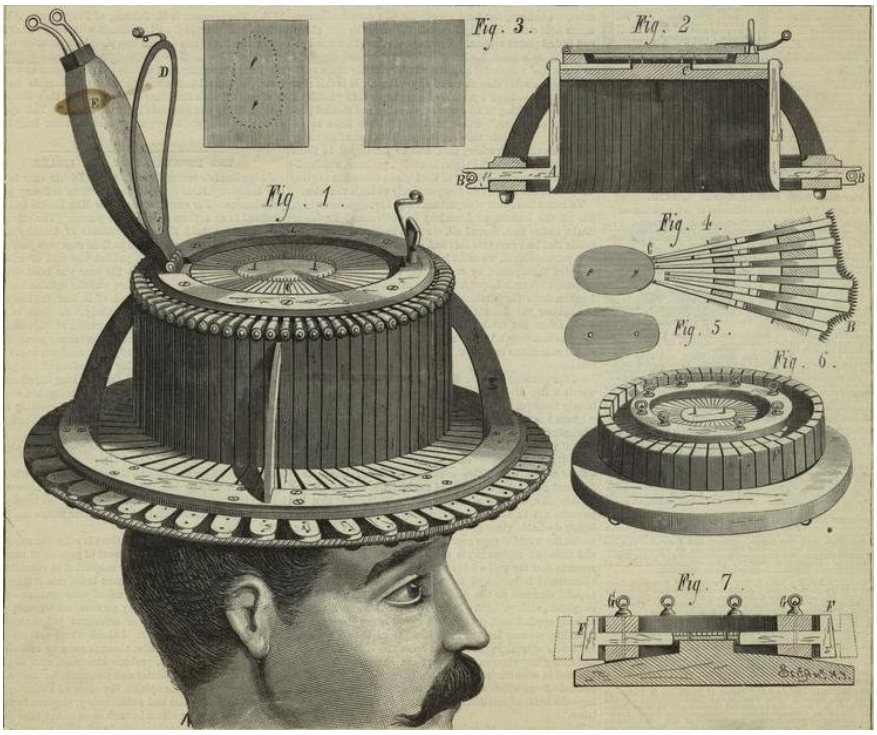

Figure 4.4 A conformateur advert

(http://baldwinhats.com/how-to-order-a-hat/ [Accessed 20 October 2014])

Clarke and Clapham said, "It may be that this is only another proof of how near akin great wits and madmen are; but, be that as it may, it at least also shows that such a frontal development is not a possession so ardently to be desired as we have hitherto been taught to believe." A paper in 1869 by a fellow PMO, George Wilson, had reported that after

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[817] Major 1875: 276–277.
[818] Clapham and Clarke 1876: 152.

measuring the skulls of 460 prisoners, he had found habitual criminals to be "cranially deficient".[819] By adapting new techniques they were able to combat old stereotypes. They reported, initially "we were much struck with the deceptive appearance of foreheads when viewed from the front, and it was not until we adopted Lavater's stand-point, and examined them from above, that we were able to determine their true value as regards capaciousness."[820] Here they are referring to Swiss physiognomist Johann Kasper Lavater's methods of measuring the shape of the head and finding relationships and differences between different parts of the skull and the brain underneath.

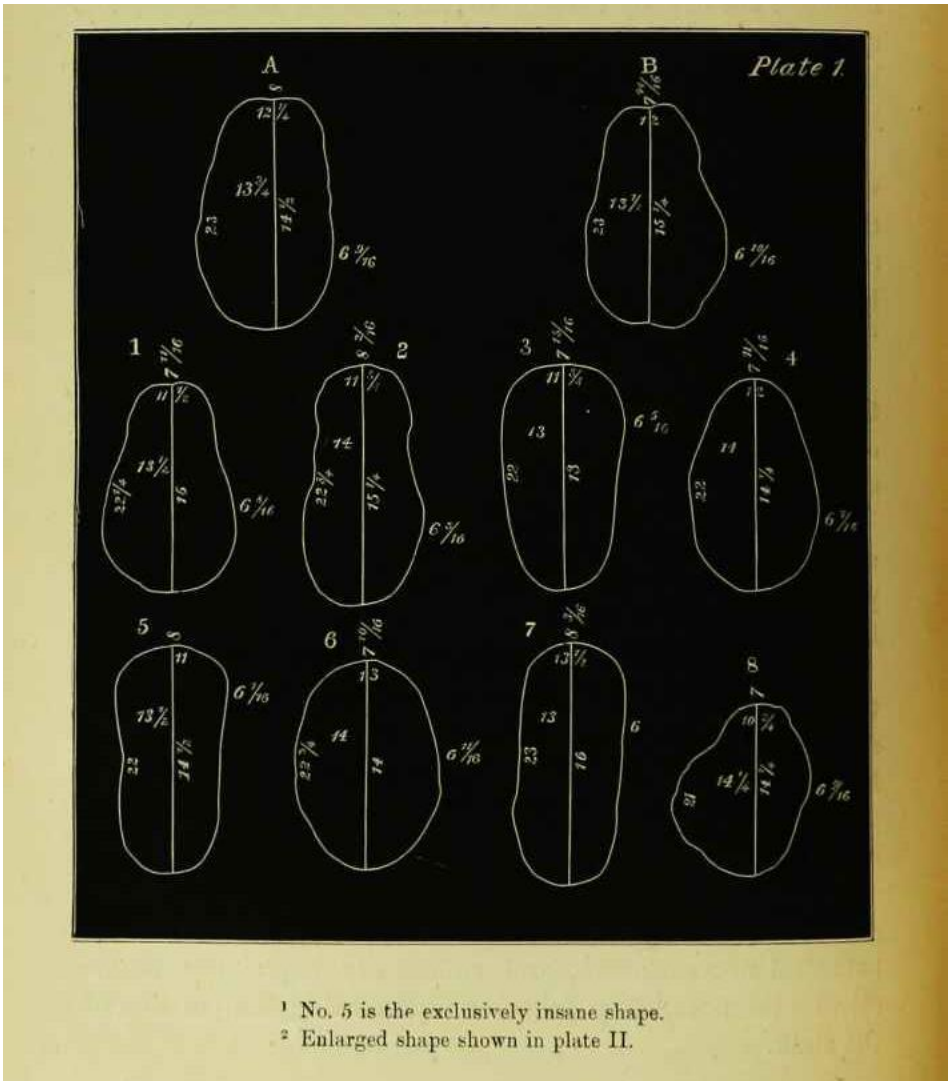

Figure 4.5 Skull shapes

Clapham and Clarke 1876: 156.

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819 Ellis 1901: 37.

820 Clapham and Clarke 1876: 152. Johann Kaspar Lavater (1741–1801) was a Swiss physiologist, theologian and poet who sought relationships between the mind and the body.

Using the conformateur, they made careful maps of their subject's heads as well as collecting other data about each individual (see Figure 4.5). They were thorough in the measurements. Many of the records could be found on general reports made by asylum and prison staff when accepting an individual into the respective institutions but were nevertheless carefully, and precisely retaken by Clarke and Clapham. Having taken the measurements Clapham and Clarke made some observations. Although they believed all types of people had a variety of skulls there was one exception which they called the *insane type*.[821] This is where the "greatest traverse diameter is placed in the anterior third of the skull, and is in fact the head possessed in the noble forehead."[822] They did observe that in their sample "the average size of the head was considerably larger in the insane than in the criminals, notwithstanding the idiots included in the former class."[823] They also observed that "male heads were much larger than female, the average of the latter, indeed, being in all their dimensions below that of male idiocy." "This fact alone" they claimed was "sufficient to show the non-essential character of size."[824] The rest of the paper is exclusively about men, although there is no reason given as to why. Speculatively it could have been for a number of reasons; simply because there were more men in both institutions. Or the choice had a scientific basis where men were believed to represent 'normal' humans, whereas a woman was an alternative to this norm.[825]

Some of the studies revealed more about human proportions than the relationship between the brain and intelligence. For example, they found, contrary to expectations, "that there was a marked and decided enlargement of the head in all directions as the weight of the body increased."[826] Similarly, "As the size of the head varies with a man's weight so does it also with his height—the taller the man the larger his head."[827] These observations did not tell the readers much about criminals or lunatics but did provide a detailed study of human proportions. They argued that "in both criminals and lunatics the skull showed a larger average size for those above 40 years of age as compared with the average of those under 40 years."[828] Conversely "in lunatics above 40 years of age the height, circumference, whole and frontal, and the transverse diameter were greater, but both

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[821] Clapham and Clarke 1876: 153.
[822] *Ibid*: 153.
[823] *Ibid*: 158.
[824] *Ibid*: 158.
[825] See Magnello and Hardy 2002 and Higgs 2004 for more on nineteenth-century statistics.
[826] Clapham and Clarke 1876: 163.
[827] Clapham and Clarke 1876: 161. See Gooday 2004: 12 for a discussion on what constituted an accurate or absolute measurement.
[828] Clapham and Clarke 1876: 161.

arches and the antero-posterior diameter were shorter. In the criminals the transverse arch alone was shorter in those above 40 years of age, the other measurements being greater than in the younger men."[829] The new observations made were undermined when they admitted that it was possible that this apparent shortening of the arches may have been caused by those over 40 having less or thinner hair than the under forties. They rectified the situation by indicating that "the shortening of the antero-posterior diameter is not explicable on these grounds."[830]

Having considered general characteristics of people, Clapham and Clarke then moved onto medical and psychological traits. They identified a number of characteristics they believed to be important. Those suffering with "Chronic-Mania had the greatest average [skull] circumference both whole and frontal." People suffering with epilepsy had "the greatest antero-posterior arch" and those with "Mono-mania of Suspicion [had] the longest antero-posterior diameter", to give a few examples.[831] In one of the few summaries in the article not presented as data in a table, they state "the Cranial Index arranges the diseases in the following order of skull value:—Chr. Mania, Epilepsy, Mono-mania of Suspicion, Acute forms, Imbecility, Dementia, General Paralysis, and Idiocy."[832] This is not elaborated on by Clapham and Clarke but could be used as a tool to find further evidence for a diagnosis.

Two areas of insanity which were studied by Clapham and Clarke were "idiocy" and "imbecility" possibly because these were perceived to be the two most common, least dangerous, but possibly heritable, forms of insanity. This view had come out of the research and decision making at Woking and Broadmoor (chapter 4). When studying idiocy they found that "several of the members of this class had heads too small to fill the conformateur," and consequently we have little new to say about them. "It may be noticed, however, that not one of them had a head circumference of less than 20 inches, whilst one hydrocephalic idiot had a circumference of 25 inches the largest head in the tables. Only two of the "idiotic" heads were noticeably asymmetrical and in one of these cases there was a history of forcible instrumental delivery."[833] This contradicted existing beliefs that insanity would be marked and obviously different in the skulls of the insane as per phrenology. They also found that "Imbecility was associated with marked symmetry of skull, the only deviation being a slight tendency to left-headedness. The cases were also

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[829] *Ibid*: 161.
[830] *Ibid*: 161.
[831] *Ibid*: 166–7.
[832] *Ibid*: 166–7.
[833] *Ibid*: 167.

remarkable for great width of forehead and anterior half of skull, over 30 per cent, having the greatest transverse diameter anterior to the central point of the head."[834] These results show that there was great variety in the skulls they were observing and obvious clear patterns and classifications were difficult to draw.

Once again, there was no "conclusion" to the article as Clapham and Clarke made stylistic choices in their scientific statements, emphasising statistics and evidence rather than interpretation or consequences. This was part of Clarke's trade-mark writing style, as was the focus on numbers and statistics as integral to his scientific method. The detailed focus on data collection provided much information to readers about the variation in human development and highlighted the difficulties in classifying criminal physiology or making physical distinctions between those with different forms of insanity or criminality from their skull alone. They were using more sophisticated biometrics than Francis Galton had in 1865 when he published "Hereditary Talent and Character". To create his data he counted entries in Sir Thomas Phillip's biography of "original minds" *The Million of Fact*.[835] Clarke and Clapham's technique involved more data collection and was able to draw on the data collecting techniques already employed in prisons and asylums (see section V) as well as new technologies.

Figure 4.6 William Bevan-Lewis

Anon 1930: 388.

[834] *Ibid*: 167.
[835] Galton 1865: 158.

The second key text Clarke wrote, and the most important scientific breakthrough Clarke made, has been largely lost to posterity. During 1877 and 1878 Clarke worked with William Bevan-Lewis (Figure 4.6) who was, at the time, a medical assistant and pathologist at the West Riding Asylum. The paper they wrote together was "*The Cortical Lamination of the Motor Area of the Brain*" and appeared in the *Proceedings of the Royal Society of London* in 1878. The paper was presented to the Royal Society by David Ferrier, then Professor of Forensic Medicine at Kings College, London, as only members were allowed to the meetings.[836] Forensic medicine brought together psychology, pathology, toxicology, and studies directly relating to murder such as blood splatters and decomposition of bodies. I have found only a few passing mentions of Clarke's paper, including Finn (2012) and E Clarke and O'Mally (1968). Clarke and O'Mally's *The Human Brain and Spinal Cord* has one (short) paragraph mentioning Henry Clarke in the context of Bevan-Lewis but they only see this publication as Bevan's "first paper" and not much more than that. Yet this paper clarified important details in the physical structure of the brain and made a considerable contribution to histology. Clarke and Bevan-Lewis contributed to the body of knowledge in pathology, psychology and psychiatry which forensic medicine drew upon, particularly by advancing knowledge of how the brain worked.

Joseph Shaw Bolton, then Professor of Psychiatry at the University of Leeds, wrote of Bevan-Lewis and Clarke; "The first important paper on cortical localization was that of Bevan-Lewis and Henry Clarke, published in 1878". He continued "this communication, which localised the motor area in front of the furrow of Rolando, attracted little attention owing to the fact that the conclusions contained in it were opposed to the results of the numerous physiological experiments which, during the last two decades of the nineteenth century, largely monopolised the field of inquiry into the functions of the cerebrum." This observation of Shaw-Bolton's perhaps explains why Clarke did not receive recognition during his lifetime and has subsequently been ignored by historians in all fields of medicine and psychiatry. By 1909, according to Shaw-Bolton Clarke and Bevan-Lewis had "at last obtained complete if belated recognition in consequence of the experimental work of Sherrington and Grunbaum, recently confirmed by Oscar Vogt, and the histological researches of Campbell and of Brodman."[837] For Shaw Bolton "It is an

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[836] Clarke and Bevan-Lewis 1878: 38–49.
[837] Joseph Shaw Bolton 1909, quoted in Anon 1861a, 1861b, 1861c.

interesting and in many respects a fortunate fact that the experimental method, which was responsible for the non-recognition of an important contribution to our knowledge, was also the method which first supplied evidence of its truth."[838]

Despite being largely neglected by contemporaries Clarke and Bevan-Lewis's paper represented a number of important scientific breakthroughs. Most significantly, it provided evidence for cerebral localisation. As Finn has argued, this was a new science, many of the observational or experimental advances have been lost in the story of localisation but provided much of its medical basis.[839] In 1873 Ferrier had researched electrical excitation of the brain after visiting Crichton-Browne in Wakefield. He continued the research he started in Wakefield at King's College London, where he was Professor of Forensic Medicine. Ferrier's observations gave an experimental basis for cerebral localisation and became the subject of his Croonian lectures at the Royal Society in 1874 and 1875, as well as his treaties, *The Functions of the Brain* published in 1876. As Finn has argued, Ferrier's cerebral localisation was attacked on methodological grounds but also in principle; to some cerebral localisation was "reductive of the human soul" and carried the same materialist connotations as phrenology.[840] The same arguably applied to Clarke and Bevan-Lewis.

By using new microscopy and staining techniques in their paper they were able to carefully describe the five layers of the cortex which had been recently identified by the Austrian neuropathologist, Theodor Hermann Meynert (1868). Bevan-Lewis had felt that too much emphasis was placed on peripheral nerves and attention should turn to the cortex.[841] Clarke and Bevan-Lewis agreed with Meynert's map of the brain, which was still fairly new and unexplored, and they further described the "ganglionic cells of the fourth layer" (Figure 4.7).[842] This important addition included a detailed description of the ganglionic cells (or Betz cells) and provided evidence for their existence. They also mapped their relation to motor functions which had been identified by Ferrier.[843] Betz cells are pyramidal cells or neurons in the primary cortex which Betz had postulated the existence of in 1874. As part of their evidence, they produced the first image of these cells thanks to careful microscopic study. Using these images and their research, Clarke and Bevan-Lewis managed to provide

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838 *Ibid*.
839 Finn 2012a: 156.
840 *Ibid*: 158.
841 *Ibid*: 156.
842 Clarke and Bevan Lewis 1878: 47.
843 *Ibid*: 48.

the evidence that these neurons existed and thus found and explained the previously unknown method of interaction between layers in the brain. Furthermore, they provided evidence for, or even proved, that the motor regions of the cortex were structurally organised and equipped for different roles. Effectively what they had done was prove that the brain was in layers and these layers interacted along very specific paths (Figure 4.8) Methodologically Bevan-Lewis and Clarke provide an early example and endorsement of histology—the study of microscopic anatomy of cells and tissues—and the use of microscopes in medical research. With this in mind it can be argued that Clarke and Bevan-Lewis were the first to define a functional area of the brain on histological grounds.[844] They helped open the door for localised studies of areas of the cortex in this manner (even if it was not picked up on immediately)

Figure 4.7. Ganglionic Cells of Cortex

Clarke and Bevan-Lewis 1878: 47.

[844] Clarke and O'Mally 1968: 441.

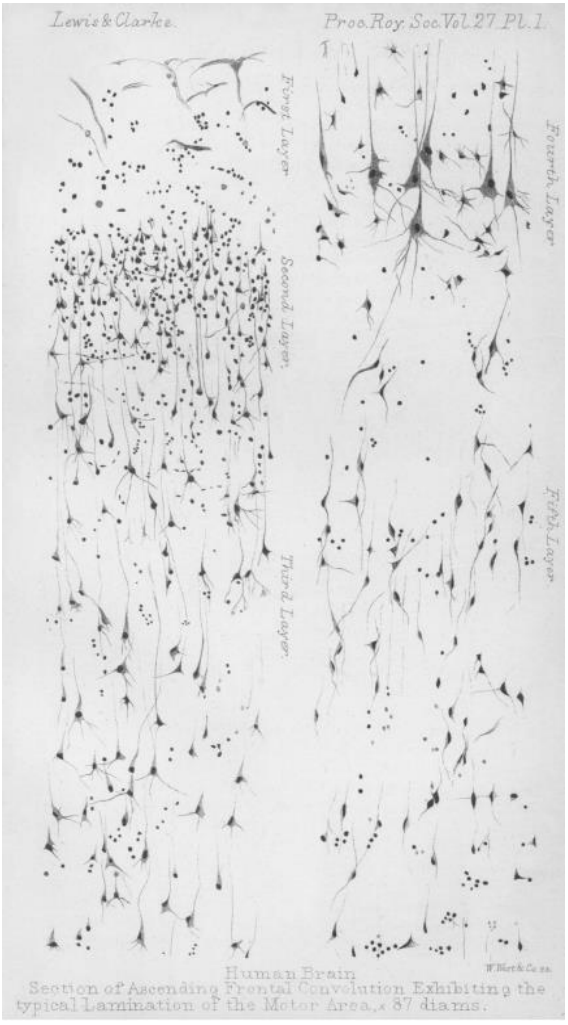

Figure 4.8 Human brain: Section of ascending frontal convulsion

Clarke and Bevan-Lewis 1878: 48.

Crichton-Browne had left Wakefield Asylum in 1876 and he was succeeded by Herbert C Major. Major was less research driven than Crichton-Browne, but was interested in the role of alcohol in the aetiology of mental illness and the 'neurohistory' of the brain in man and animals.[845] He was also concerned with increased numbers of chronic patients unable to be cured, consequences of poor sanitation and ventilation on disease and epidemics.[846] During Major's time concern grew that the asylum was just a custodian for the mentally "subnormal" or those with poor odds of recovery. Nevertheless, after Clarke and Bevan-Lewis' 1878 paper, imaging the brain remained important. Images of the brain appeared in post-mortem reports. Photography became quicker, cheaper and easier to do so appeared

[845] Todd and Ashworth 1985: 153.
[846] *Ibid*: 153.

more regularly in the records and in publications.[847] Although Finn indicated, many others did not have such thorough illustrations.[848] Pencil drawings were still used as illustrations and data, measurements and brain weights like that collected by Clarke, Clapham and Bevan-Lewis became standard. Although as Finn argues, "It is not immediately obvious to what end these measurements were taken—there does not appear to be any obvious attempt to link these sizes with the living patient's symptoms—but they do reflect developments in understanding of the brain in the period, and particularly the microscopic interests of both Major and Bevan-Lewis".[849]

The West Riding Asylum also collected pathological specimens for teaching purposes. In May 1879 Major wrote "the work of the Pathologist's department has been carried on steadily and the collection of specimens, illustrative of morbid conditions of insanity, is now very extensive and of the highest interest and value."[850] Resources like this were unavailable at the Prison, where there were less researchers, and no money or space dedicated to research. Clarke was able to utilise the connection with the asylum to engage in his work. However, at the asylum the indexing of special cases of brain disease in the post-mortem records ceased after 1880. This practice reflected the research activities of the Asylum, allowing medical men there to quickly scan and compare all patients with similar lesions or defects in brain condition for special study. The change in practice appears to have occurred when Bevan-Lewis passed on pathological duties to John Hunter Arbuckle, a man "whose interests were more surgical (both before and after Wakefield he fulfilled roles as a hospital surgeon)".[851] This possibly explains the end of Clarke's publishing as he no longer could work with the asylum. In a few years, however, Clarke and the asylum staff had made vital contributions to neurology, histology, and cerebral localisation as well as demonstrating the scientific uses of mass data collection and micro and macro observations.

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[847] Finn 2012: 171.
[848] *Ibid*: 171.
[849] *Ibid*: 171.
[850] Todd and Ashworth 1985: 165.
[851] Finn 2012a: 170.

V. Record Keeping: Maintaining Tabs on the Convict Body

Clarke and his asylum colleagues in Wakefield were not the only ones collecting data on prison populations. Nor were they the first—although Clarke was unusual in using the data for neurological research. In the convict prisons each individual criminal had to be cared for, punished and morally reformed, but in many ways, it was the collective body of criminals which worried the authorities more. The system could only work if all the component parts were carefully planned and micromanaged and each prisoner could be considered equal as far as possible. An important way to manage the system and maintain authority à la Foucault was through keeping records. In this penultimate section to chapter 4, it will be show that throughout the nineteenth century PMOs were vital to this endeavour, but many did not just keep records for records sake, instead seeing it as an "intellectual enterprise".[852] Along with the PMO's Chaplains were required to keep character logs from 1840, but some did much more.[853] The data collected provided "raw material" which could be used by "the sciences".[854] The data and statistics produced enabled "others to generate theories and legislation that are figured nowhere in the numbers themselves" as well as representing the samples taken.[855] None of the PMO's discussed in this thesis demonstrate this better than Clarke but scientific data collection was not limited to the end of the nineteenth century.

1780–1860 has been identified by Edward Higgs as distinct phase in criminal record keeping, marking the development of the "information state."[856] But it was not until 1864, some eleven years after the official end of transportation, that criminal record keeping was introduced in legislation following the Carnarvon Committee and Joshua Jebb's death.[857] The introduction of records was an attempt to keep track of individuals who had any previous convictions. This was part of a scheme to give harsher punishments to repeat offenders as part of the programme to reduce crime statistics and combat the apparent increase in repeat criminal activity. The intensification in record keeping could be perceived as an indication of the national programme to come; local knowledge and records were no longer sufficient to identify repeat offenders, so a nationalised system of identification and policing was necessary. It was asserted by the press that most crimes

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[852] Devereaux 2009: 752; Shoemaker and Ward 2016: 2, 3.
[853] *Ibid*: 5; Great Britain, Home Office, Regulations for Prisons in England and Wales 1840: 43.
[854] Poovey 1993: 275.
[855] *Ibid*: 275.
[856] Higgs 2004: 10–27.
[857] Penal Servitude Act 1864.

were committed by those who were released early from prison on a ticket-of-leave, all of whom were characterised as hardened and habitual criminals. To arrest public fears the prisons and police needed to monitor criminals more effectively and reduce crime rates. Data collection and statistics were utilised to this end.

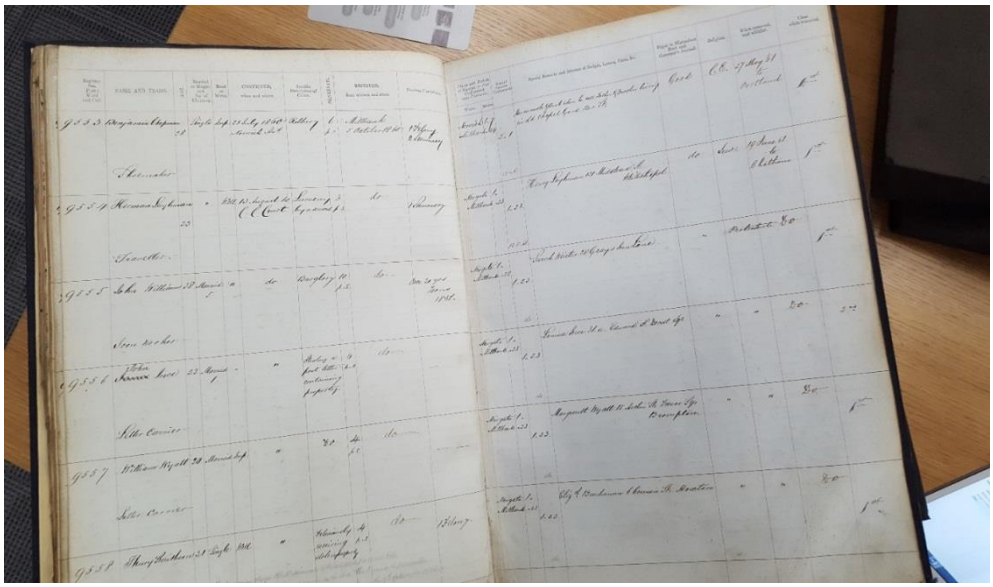

Figure 4.9 Individual entries in Pentonville' prison register
1860–1862 TNA.HO 24/18

Prison Registers kept notes on every individual who passed through the doors of the convict prisons.[858] In the early part of the books the prisoner's names and number are listed alphabetically to act as an index, followed by more detailed notes on each individual (Figure 4.9).[859] Notes were made of a convict's register number, ward and cell (which was also their prison name), their actual name, aliases, trade, their age (at Pentonville they had to be over eighteen), marital status, number of children, their religion (mostly Church of England; there were very few non-Christians), and whether they could read or write (indicating their level of education). There was also information about their crime(s) including; a specific description of the crime they had committed, when and where they had been convicted, the length of the sentence they had been given, and any previous convictions (most had at least one felony listed, although surprisingly not much detail was given in many cases). In addition, there were notes relating to their time in prison including; place and periods of separate or other confinement since conviction including where and for how many months (this was essential as there was a limit on how long

858 *The National Archives* (HO.24) holf more examples of convict prison registers.
859 TNA.HO.24/18 Pentonville Prison Register 1860–1862.

separate confinement could be applied and prison authorities wanted to avoid cases of insanity.[860] Many had undertaken periods of separate confinement at Millbank before moving to other prisons. Most had been in separate confinement for ten days to four months in other prisons before being entered into a register or during a previous conviction). There was also a column for special remarks and account of marks awarded, letters received, and visitors (mostly relatives). If the convict appeared in a Misconduct Book or Governor's Journal this was recorded. Finally, it was logged when the convict was removed from a prison, and where they were moved to and what penal class they were in.[861] A huge amount of data was generated. These details could be cross referenced at a later date, giving indications of the convicts past and potential future, their ability to read the bible or to do certain jobs, and if they could be persuaded to reform for their children. Conversely and more pessimistically, they might have warning if the prison was likely to see more of the family.

In addition to this written information in 1863 the Carnarvon Committee recommended that taking photographs of prisoners would be good practice, although photography did not become compulsory until 1871.[862] These photographs would allow the police, courts and prisons to identify repeat offenders, adding to the data, assuring appropriate punishment was received, and the photographs might act as a deterrent as re-capture would seem more likely. Some believed that tattooing or branding would be a better identifier of criminals, but photography was selected as a humane and scientific choice.[863] Furthermore, photographs, unlike permanent markings, would not hinder ex-convicts' chances of employment. The introduction of the prison record was part of a wider scheme to identify the "criminal class" as a group of people distinct from ordinary people and other offenders. During the 1860s different types of offender were identified, including the "casual" offender and the "habitual offender" as we saw in chapters 3 and 4.

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[860] TNA.HO24. Pentonville Prison Registers.
[861] TNA.HO24/69. *Pentonville Prison Register.* 1860–1862.
[862] Prevention of Crimes Act 1871.
[863] Priestley 1999: 12.

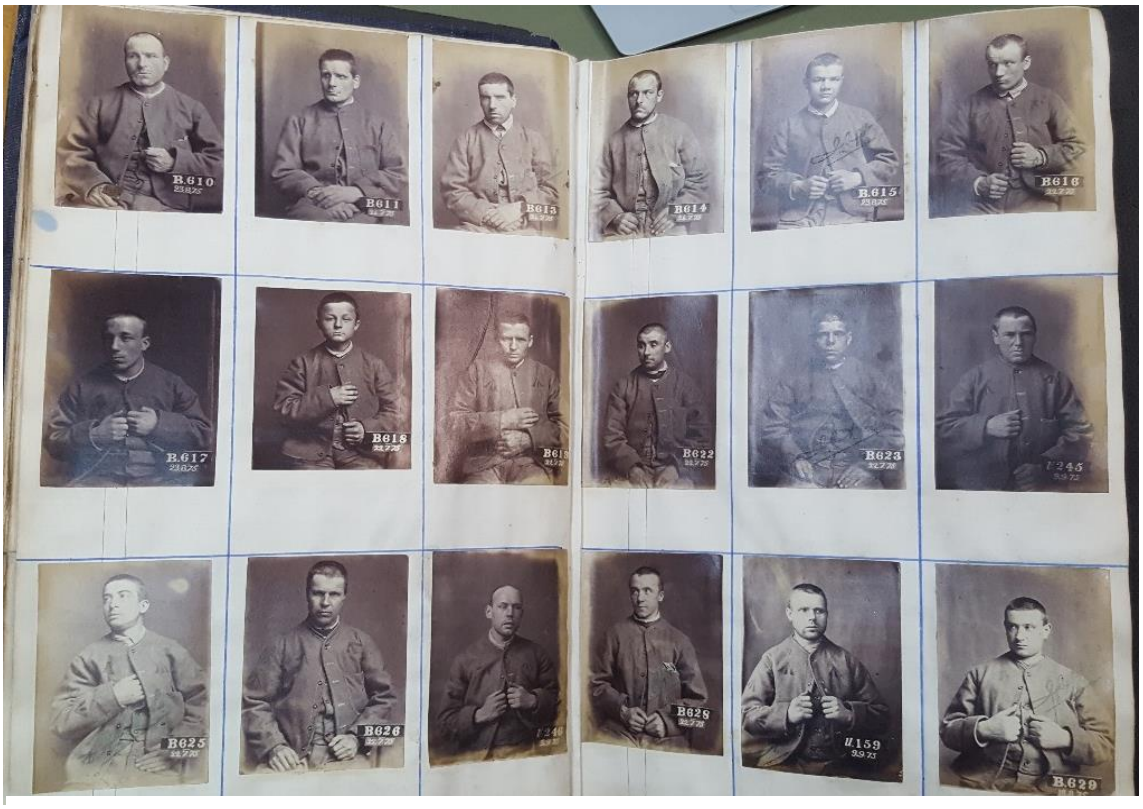

Figure 4.11 Pentonville photograph book 1874-6

TNA.PCOM2/98 1874-6. Photograph Album of Prisoners, Pentonville.

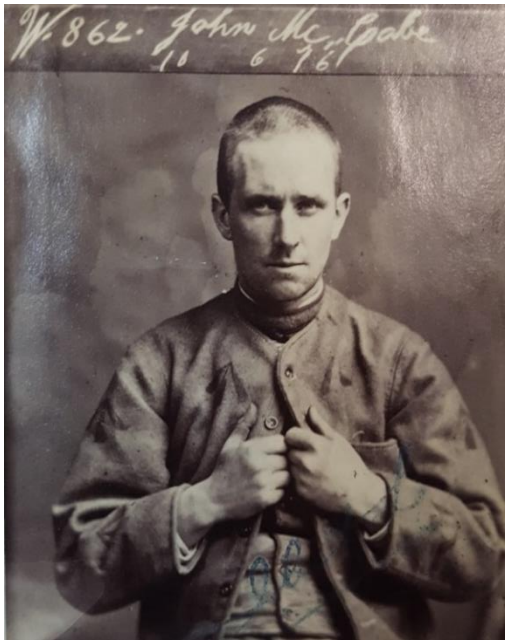

Figure 4.10 Pentonville convict with a prison haircut

TNA.PCOM2/98. Photograph Album of Prisoners, Pentonville. 1874–76.

Figure 4.12 Pentonville convict without a prison haircut

TNA.PCOM2/98. Photograph Album of Prisoners, Pentonville. 1874–76.

Once photographs started to be taken they were entered into large books for each prison (see Figure 4.10). Often the photographs were only marked with a plaque on a post with cell number (gantry and number) and the date. Later names were included, presumably for ease of reference (see Figure 4.11 and Figure 4.12).[864] These photos also show two different hair styles, in the last three months of a sentence before release and possibly in the first few days in prison convicts were allowed their own hair styles and facial hair; the rest of the time it was a regulation look, with regulation clothing. Regulation clothing designed with markers of penal servitude such as the arrow design which would mark out escaped convicts to the public.

The uniformity within the prison enforced conformity. It meant that everyone was seen in the same way making their distinguishing features stand out. It was quickly noted, however, that men who looked like convicts found it difficult to find work on their release and were likely to change their appearance by growing their hair or beard making it harder to identify them again. Hands were also visible in the shots as they could not be changed like hair and provided further indicators of individuality and of a "man's calling".[865] Furthermore, it was a common belief that hands were a gauge of social class and by extension moral class. In each photograph the convict is looking straight ahead or slightly to one side. In later albums two photos were taken one from the front and one from the side to glean as much information as possible. In some instances mirrors were used to achieve the same affect.[866] Initially prison photographs were introduced to prisons by interested governors, officers or medical men, but became compulsory as part of the attempt to reduce numbers of repeat or habitual offenders. The concept of the habitual criminal really started to crystallise in the 1860s towards the end of Charles Bradley's prison career in Pentonville, but perhaps influenced the second wave of experimenting and penal theory that came about in the mid-1860s.

The Habitual Criminals Act passed in 1869 created a more regimented system of national criminal registers funded by parliament. Information had to be submitted by prison governors and police constables about the identity of those who had committed a crime (Figure 4.13). The book comprised an "alphabetical register of habitual criminals who have been liberated, subject to the penalties of the 8th clause of the "Habitual Criminals

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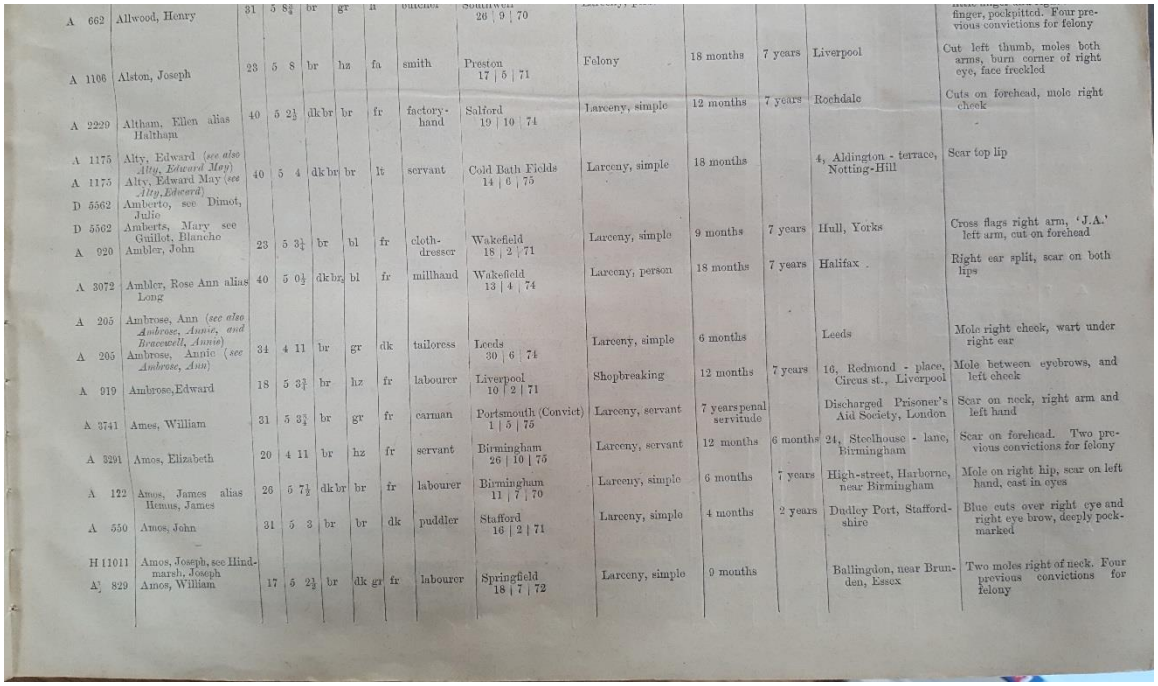
[864] TNA.PCOM2/98. *Photograph Album of Prisoners: Pentonville*. 1874–6.
[865] Pritchard 1882: 122; TNA.PCOM2/98. *Photograph Album of Prisoners: Pentonville.* 1874–6.
[866] See TNA.PCOM2. *Photograph Albums. 1870–1900*.

Act 1869;" or the 7th or 8th clauses of the "prevention of crimes Act, 1871."[867] The book was to be similar to the prison registers kept at each convict prison but with more detailed physical descriptions of each person and additional information about identifying features such as "pockmarked" "'M.T.' [on] Right arm", "cuts on forehead" or "mole on left shoulder".[868] Almost everyone had a distinguishing feature identified and some previous convictions listed in the extra information column The volumes would be printed in the Printing Works at Her Majesty's Prison, Brixton for distribution.[869] This would help keep down printing and production costs making them accessible to all prisons and the police.



A 662	Allwood, Henry	31	5 8¾	br	gr	fr		26 | 9 | 70					finger, pockpittcd. Four previous convictions for felony
A 1106	Alston, Joseph	23	5 8	br	hz	fa	smith	Preston 17 | 5 | 71	Felony	18 months	7 years	Liverpool	Cut left thumb, moles both arms, burn corner of right eye, face freckled
A 2229	Altham, Ellen alias Haltham	40	5 2½	dk br	br	fr	factory-hand	Salford 19 | 10 | 74	Larceny, simple	12 months	7 years	Rochdale	Cuts on forehead, mole right cheek
A 1175	Alty, Edward (*see also Alty, Edward May*)	40	5 4	dk br	br	lt	servant	Cold Bath Fields 14 | 6 | 75	Larceny, simple	18 months		4, Aldington-terrace, Notting-Hill	Scar top lip
A 1175	Alty, Edward May (*see Alty, Edward*)												
D 5562	Amberto, see Dimot, Julie												
D 5562	Amberts, Mary see Guillot, Blanche												
A 920	Ambler, John	23	5 3½	br	bl	fr	cloth-dresser	Wakefield 18 | 2 | 71	Larceny, simple	9 months	7 years	Hull, Yorks	Cross flags right arm, 'J.A.' left arm, cut on forehead
A 3072	Ambler, Rose Ann alias Long	40	5 0½	dk br	bl	fr	millhand	Wakefield 13 | 4 | 74	Larceny, person	18 months	7 years	Halifax	Right ear split, scar on both lips
A 205	Ambrose, Ann (*see also Ambrose, Annie, and Bracewell, Annie*)	34	4 11	br	gr	dk	tailoress	Leeds 30 | 6 | 74	Larceny, simple	6 months		Leeds	Mole right cheek, wart under right ear
A 205	Ambrose, Annie (*see Ambrose, Ann*)												
A 919	Ambrose, Edward	18	5 3¾	br	hz	fr	labourer	Liverpool 10 | 2 | 71	Shopbreaking	12 months	7 years	16, Redmond-place, Circus st., Liverpool	Mole between eyebrows, and left cheek
A 3741	Ames, William	31	5 3¾	br	gr	fr	carman	Portsmouth (Convict) 1 | 5 | 75	Larceny, servant	7 years penal servitude		Discharged Prisoner's Aid Society, London	Scar on neck, right arm and left hand
A 3291	Amos, Elizabeth	20	4 11	br	hz	fr	servant	Birmingham 26 | 10 | 75	Larceny, servant	12 months	6 months	24, Steelhouse-lane, Birmingham	Scar on forehead. Two previous convictions for felony
A 122	Amos, James alias Hemus, James	26	5 7½	dk br	br	fr	labourer	Birmingham 11 | 7 | 70	Larceny, simple	6 months	7 years	High-street, Harborne, near Birmingham	Mole on right hip, scar on left hand, cast in eyes
A 550	Amos, John	31	5 3	br	br	dk	puddler	Stafford 16 | 2 | 71	Larceny, simple	4 months	2 years	Dudley Port, Staffordshire	Blue cuts over right eye and right eye brow, deeply pock-marked
H 11011	Amos, Joseph, see Hindmarsh, Joseph												
A 829	Amos, William	17	5 2½	br	dk gr	fr	labourer	Springfield 18 | 7 | 72	Larceny, simple	9 months		Ballingdon, near Brunden, Essex	Two moles right of neck. Four previous convictions for felony

Figure 4.13 The habitual criminals register

TNA.PCOM2/404. Register of Habitual Criminals. 1869–1876.

Edmund Du Cane, who was by 1869 the Director of Convict Prisons, wrote the preface for the volumes informing the users that "the names of all such prisoners have been placed

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867 TNA.PCOM2/404. *Register of Habitual Criminals.* 1869–1876.

868 The layout was like a directory; Office register number. Name and Allias [sometimes also says see alternative name if they were convicted under more than one name]; Description; age: height: hair: eyes: face: trade or occupation. Prison from which Liberated and date of liberation. Offence for which convicted. Sentence [length of]. Supervision [period in years/months]. Intended residence after liberation. Marks and Remarks [identifying physical features]. Many of the descriptions were written in abbreviated code for examples Au = Auburn: Fr = Fresh: Sw = Swarthy. TNA.PCOM2/404. *Register of Habitual Criminals.* 1869–1876.

869 By this stage Brixton was a men's prison. Printing was not considered a suitable occupation for women.

in alphabetical order, and thus all local authorities will have at their command, in a most convenient form, the information hitherto to be found only at the Central Registry, by which they may establish *prima facie* identification of any person suspected to be an habitual criminal…"[870] Du Cane alluded to previous practices where repeat offenders where often only identified if they were recognised by a member of staff in the police, courts or prisons. In London there were designated times when prison staff and police would visit all the prisons in London, convict and local, to identify those with previous offences which had gone unnoticed because they had been caught in a different part of the city or had used aliases.[871] In an attempt to identify repeat offenders much attention was paid to the use of aliases and Du Cane footnoted "one woman, named Bridget Kingstry, (a native of Sligo, Ireland) has furnished herself with no less than 16 aliases (which do not seem, nevertheless to have answered her purpose in enabling herself to escape identification), and has recorded against her 39 convictions."[872] In total 179,601 persons were placed on the register between the 11 December 1869 and 31 March 1876, as illustrated in

Table 4.1.[873]

Table 4.1 Persons on Habitual Criminal Register 1869–1876

Date	Number of persons placed on the register
1869 and 1870	31,764
1871	27,990
1872	28,698
1873	29,136
1874	28,626
1875	26,407
1876 (to 31st March)	7,080

[870] TNA.PCOM2/404. *Register of Habitual Criminals.* 1869–1876.
[871] TNA PCOM7/248 (1894–1895). *Habitual Criminal: Report of the 1894 Departmental Committee*.
[872] TNA.PCOM2/404. *Register of Habitual Criminals.* 1869–1876.
[873] TNA.PCOM2/404. *Register of Habitual Criminals.* 1869–1876.

This was a large number of people to process. In 1869, the Commissioner of the Metropolis argued that keeping such records in books would be heavy and cumbersome to use. He proposed instead that each individual be recorded on a separate piece of paper and kept in alphabetical order. These should also include all aliases used by those convicted. The Habitual Criminals Act did not seem to have any impact on the number of habitual offenders so in November 1871 the Prevention of Crimes Act created separate registers for Scotland, England and Wales. The quantitative data was not really used by the HO other than as a record, argue Shoemaker and Ward, but for the chaplains, and I would add doctors, it was an important part of their job and intrinsic to their understanding of criminality and the causes of crime.[874]

The Habitual Criminal Register was reviewed by Godfrey Lushington of the HO in 1874, and seen as a failure. The register was too unwieldy in numbers (approximately 30,000 new cases a year). Only 3,957 enquiries were made, and only 890 led to identifications. A number of these were for minor offences (such as stealing ginger beer). There was too much paper with little result.[875] Lushington argued the system should be abolished or completely overhauled.[876] He saw the Register as a central record office—particularly for those who had more than one offence—rather than a tool to identify criminals. If the Register were to be reformed, Lushington recommended that it be limited to crimes listed in the Habitual Criminals Act of 1869 as this would reduce paper. He also recommended the system be managed by the HO which could give prison governors the legal power to photograph and examine prisoners. Furthermore, registers should be separated by gender, like the Irish system. Following this report, the register was transferred to the HO within a year.[877] Regular updates on the legislation managing the register were needed.

In 1876 the Prevention of Crimes Amendment Act reduced the number of people in a Register book to 22,000 to make them more manageable, it "curtailed" the photographing of prisoners and supplemented the Registers with books of "distinctive marks" such as burns, scars, or tattoos, which were meant to make cross referencing quicker and easier.[878] The police thought this reduction in records and photographs was a threat to public

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[874] Shoemaker and Ward 2016: 9–13.
[875] 22.5% of searches in England had positive results.
[876] Hebenton and Thomas 1993: 18.
[877] *Ibid*: 19.
[878] Davie 2010: 94–95.

security. They believed that many convicts returned to criminal practices and "in the absence of a photograph their re-apprehension [was] considerably delayed." The Commissioner of the Police requested that this be brought to the attention of the Secretary of State, Richard Cross, and suggested photographing selective prisoners thirty days before their release.[879] The cost of taking photographs and the cumbersome nature of searching through them meant that the prison governors and directors did not always appreciate their value. The system became inconsistent again. The photographs might not have been useful to the prison authorities, but they were invaluable to the police. In July 1879, the Director of Criminal Investigations from Scotland Yard "request[ed] sanction for the photographing for selected prisoners." He valued the information on habitual criminals which could be obtained from photographs so much that he suggested that the expense could be covered by the police funds given that "these photographs would be of great service in apprehending offenders".[880] His request was approved.[881]

Despite the official reduction in photographs, prison officers, doctors and the police had been using photographs since the 1850s and continued to find them useful, as did other medical professionals, in particular psychiatrists based in asylums, and those working in the new field of forensic crime scene analysis.[882] Henry Clarke has been attributed with taking portraits of asylum patients and prisoners in Wakefield, some of which are now in the Wellcome Collection.[883] These pictures were apparently given to auction at Sotherby's in 1987 by Clarke's decedents and thus attributed to him, but are dated 1869, before Clarke had even attended medical school. Nothing in the archives survives to prove whether Clarke was involved in photography at the asylum or prison, but it is unlikely he took the photos attributed to him at the Wellcome Trust if they are dated correctly. Given his interests in medicine, heads and imagery, however, it is possible that he was involved in photography at both institutions after he arrived in Wakefield in 1876. The nearby Asylum in Wakefield also had a photography studio. Inspired by Crichton-Browne's foray into amateur photography. From 1868, the asylum had a makeshift studio in a court yard, but this was soon replaced by a purpose-built studio in 1870 alongside a pathology museum. Despite this new equipment only one in ten patients were photographed and some were

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879 TNA.HO45/9518/22208/C. *Habitual Criminal Registers: Photographing of Selected Prisoners.* 1879–1883: 1.

880 TNA.HO45/9518/22208/C *Habitual Criminal Registers...* 29 July 1879: 1.

881 TNA.HO45/9518/22208/C *Habitual Criminal Registers…* 7 August 1879: 1.

882 The police had been using photographic portraits since the early 1850s, the earliest probably being Birmingham Police in 1850. Davie 2010: 92.

883 Wellcome Library, London. Iconographic and Images Collection.

photographed by photographers outside the asylum such as "G & J Hall" of Wakefield, suggesting they thought the pictures were worth the financial expenditure but might not have had a skilled photographer on site.[884]

Crichton-Browne had a large collection of photographs of asylum patients. He sent a collection of approximately forty of these photographs to Charles Darwin in 1871 to assist with the development of *The Expression of the Emotions*. Darwin only used one of these photographs in his book.[885] Although only one picture appeared in print Sander Gilman argued that the pictures had a great impact on Darwin's research and inspired correspondence between himself and Crichton-Browne (and possibly others) on the value of photography to science and how much a photograph could be considered a true image of the subject.[886] Crichton-Browne's photography built on the work of Hugh Welch Diamond from the Surrey County Asylum, an early adopter of photography, founder of the Photography Society, and the first to take pictures of asylum patients.[887]

Photographs taken in prisons and asylums were used to support degeneration theories as well as evolution. The convict face seemed to some to show that at least some criminals were animalistic, or an atavistic throwback to previous stages in evolution. Du Cane believed at least a third of the convict population had "decidedly diseased constitutions".[888] In a piece in the *Transactions of the National Association for the Promotion of Social Science* Du Cane told his readers he saw common physical traits in habitual criminals which might support a biological explanations of crime, or an ancestral type as had been suggested to him by PMO Robert Gover.[889] Photographs objectivity was used to give degenerationists metaphysical authority to illustrate this potential truth. A number of PMOs including Gover, William Guy, Bruce Thomson, and David Nicholson all emphasised "the particular intractable nature of habitual crime, its perpetrators living specimens of degeneracy and/or arrested evolutionary development" that could resist the prison systems reformatory effects.[890] Outside of a select group of men interested in prisons, crime, hereditary and eugenics the appearance of criminals was a moral indicator, not something of scientific interest. Commentators referred to the "ugly", "devious", or

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[884] Finn 2012a: 108–109.
[885] Prodger 2009: 97. And that one may have been taken at the Crichton Royal in Dumfries rather than at Wakefield and merely collected by Crichton-Browne.
[886] Gilman 2014.
[887] *Ibid.*
[888] Du Cane 1875: 300.
[889] *Ibid*: 300–301.
[890] Davie 2010: 89.

"brutal" look of criminals and by the 1860s this appearance was considered a defining feature of the criminal class.

The issue of who should be photographed, and why, continued to be a problem. In October 1880 the police requested photographs and descriptions of all habitual criminals be taken and forwarded to the Director of Criminal Investigations, Great Scotland Yard Convict Office, and to the London and provincial police.[891] This was approved by Du Cane on the condition that payment was made to the Prison Department at a cost of two-pence per photograph "other than for those of convicts discharged into the Metropolitan policing district."[892] Soon albums were being made for the police which were very similar to the registers and albums previously produced for use within the prisons. Applications were made to purchase twenty photograph albums to be given to each police division for "the purpose of keeping in order and preserving the many photographs of thieves which come into the hands of the police."[893] It was found that the photographs of repeat offenders were of use to the police and in 1881 it was proposed that a further thousand copies be produced to issue to the provincial police. They could be printed by inmates at Millbank at a reduced cost, and had the advantage of giving a moral message to convicts that they could not reoffend without being caught.[894] Updated editions continued to be printed and circulated and the cost was covered by subscriptions.[895] These albums demonstrate the usefulness of photographs, measurements and statistics to the police as pioneered by the convict prisons. The data collected could be used by police, in the courts and by prison doctors, statisticians and social theorists still trying to bring Britain's criminal population under control.

It has been noted throughout this thesis how much data was collected by PMOs and the prison staff, particularly when a convict entered a prison. Data collection for the PMOs was primarily to assess if a convict was suited to hard labour. By 1863 the law requested that ten pieces of information about each inmate was collected: this included height, arm span, age and when possible a photograph, although as we have seen often more information than this was recorded. This sort of data was meant to help track repeat offenders but was stored in individual prisons, it was eventually correlated at Scotland Yard in a simplified version of the French "Bertillonage system", but this was difficult as it was on paper and therefore extremely cumbersome to search through, despite the

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[891] TNA.HO45/9518/22208/C. *Habitual Criminal Registers...* 23 October 1880: 2.
[892] TNA.HO45/9518/22208/C. *Habitual Criminal Registers...* October 1880: 2.
[893] TNA.HO45/9518/22208/C. *Habitual Criminal Registers...* 11 December 1880: 3.
[894] TNA.HO45/9518/22208/C. *Habitual Criminal Registers…* 17 January 1881: 4.
[895] TNA.HO45/9518/22208/C. *Habitual Criminal Registers....* 8 March 1883: 6.

"distinctive marks" books introduced in 1876.[896] The data collected was then used for other purposes by PMOs who were often statisticians themselves, reformers, policy makers and later eugenicists. Mary Poovey has argued that by 1835, for many statistics were seen as objective and scientific when following what was seen as the Baconian statistical method, although it still often just served other sciences. Furthermore, numbers held more value than rhetoric.[897] It was agreed at the 1831 BAAS meeting that statistics was not a science as it was primarily practical not theoretical, but a practical tool is exactly what the PMOs needed to make arguments about the day-to-day running of the prisons.[898]

Photographs and entry forms were not the only way to keep a record of a criminals' physical characteristics. Other techniques were developed in and out of the prison, drawing on the techniques and records already generated by prison staff. Nationalisation in 1877 focused on making the prisons uniform to reduce repeat offenders, but the problem was still catching repeat offenders: The Habitual Criminal Registers were not enough. In 1894 a committee was put together to report to the Secretary of State on the best way to proceed with the identification of the so-called habitual criminals.[899] The management of habitual criminals was no longer just for prisons who wanted to improve their statistics relating to repeat-offenders. The subsequent report was presented to both Houses of Parliament as well as the Secretary of State. The report told the government that in 1894 the prison system still kept a habitual criminal registry and second volume arranged by distinctive marks (scars, tattoos, amputations, etc.) on particular areas of the body (head, neck, arms, etc.).[900]

For the 1894 committee, there were three official failures with this system—mistakes in identification, potential failures to identify habitual offenders and the labour required both to create and refer to these volumes. The committee reported that some police forces used the books, but not in the way intended. It was more likely that habitual criminals were still identified mostly by knowledgeable police or prison staff who recognised repeat

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[896] Davie 2005: 196–197. The British Bertillonage system recorded eleven measurements from the individual including height, arm span, length of right ear, head size etc and recorded it on a card along with any other observations about the individual and two photographs, one full faced portrait and one profile. Later this information was supplemented with fingerprints.

[897] Poovey 1993: 257–8, 259.

[898] *Ibid*: 256.

[899] The committee consisted of Charles Edward Troup (Home Office), Major Author Griffiths (Inspector of Prisons) and Melville Leslie Macnaghten (Chief Constable of the Metropolitan Police) and was formed by Prime Minister Asquith.

[900] The authors expressed astonishment that criminals – particularly habitual criminals – provided the penal system with such obvious markers as tattoos.

offenders, rather than people using the books. This unofficial system required staff to be knowledgeable and meant habitual offenders were mostly only identifiable if they continued to reside and commit crime in a small local area. The committee reported that to get around this problem in London, all criminals committed by magistrates were initially sent to Holloway Prison. Three times a week inspectors from twenty-two London divisions and the two City of London and Westminster divisions, Scotland Yard and wardens from Wormwood Scrubs, Pentonville, Wandsworth and Chelmsford went to identify offenders who they recognised. This was a mostly successful, but costly scheme.[901] In addition to the National Registry there were identification manuals created by the London Metropolitan Police and identification manuals for county and borough police, which did not necessarily follow a standardised format.[902]

The question, having established the existing system and its weaknesses, was how could it be improved? The two suggestions to be considered were the Parisian "Bertillon system of identification" and "fingerprint identification" as attributed to Francis Galton. The committee visited Paris to assess the Bertillon system and found it to be mostly successful, but reliant on careful measurements and vigilant grouping of data.[903] This also potentially had the problem that although medical men were experienced with statistics, not everyone in the prison system could master the complex filing system. The committee recommend that whatever was adopted, it needed to be "scientific."[904] The conclusion of the committee was that a combination of the two should be adopted alongside the existing system and photographs. This policy change prompted the establishment of an Anthropometric Department.

The anthropometric Bertillon, or Bertillonage, system had been created in 1879 by Alphonse Bertillon, a Parisian record clerk, and was based on a filing system which organised according to his personal interest in biometrics. The system was adopted in France and a variant adopted in Britain. Bertillon's system included taking key measurements and recording eye colour.[905] Importantly, this data was measured the same

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[901] TNA PCOM7/248 (1894–1895). *Habitual Criminal: Report of the 1894 Departmental Committee*.

[902] For example Birmingham had its own hand illustrated tattoo records, Liverpool recorded the maiden names of convicts mothers and wives to identify alias and criminal families, Leeds and Wakefield visited each other to identify criminals.

[903] Detailed knowledge of the system was required; for example if the grouping is 191–200 and 201–210 and the measurement is 200.5 where does it go?

[904] TNA PCOM7/248 (1894–1895). *Habitual Criminal: Report of the 1894 Departmental Committee.*

[905] The number of measurements changed over time and seems to differ place to place. The number taken range from 5–11 measurements.

way, recorded with the same notation and filed and accessed in a uniform manner. Bertillon also developed the "mug shot", a forward-facing and side-facing photograph.[906] This meant photographs become more informative and further standardised than the ones produced in prisons from the 1850s. This information was stored on cards in a complex filing system. This system did work but took a lot of physical space, and required accurate record keeping and the time to search through it. The Bertillon system enjoyed success around the world from the 1890s, but apparently hit a speedy demise in 1903, when two inmates in Kansas appeared to have exactly the same measurements and similar faces. From then on, historians have argued, fingerprinting became the identifier of choice.[907] The first instance of fingerprinting identifying a criminal came in 1901, when an Argentinian police officer, Juan Vucetich, caught murderer Francesca Rojas in Buenos Aires because she left behind a bloody thumb print.[908]

Fingerprinting in 1895 was associated with Francis Galton, William Herschel and Henry Faulds.[909] It had been suggested by Galton in 1892 the technique could be used for criminal identification and Henry Clarke had suggested it to the 1984 habitual criminal committee, further demonstrating his awareness of contemporary science.[910] The committee were impressed by the potential of fingerprint identification. They were, however, concerned that an army of trained experts in prisons and police stations would be needed to utilise fingerprint identification. The practicalities of first, taking and secondly, sifting through thousands of fingerprints would prove to be a mammoth task. Besides, finger prints could be modified by cuts, burns or manual labour.[911] From August 1895, Pentonville Prison became a site for experiment again; this time to see if fingerprint identification would be of any use to the justice system. It was undertaken over three months and had "been made on a very much more extensive scale than was contemplated." On 20 June 1895 the Chairman of the Prison Department was recorded in meeting minutes saying "I think it would be very useful if the finger prints of all prisoners convicted of ~~dishonesty~~ [sic] e.g. larceny, frequenting acts of vagrancy, burglary and housebreaking,

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[906] U.S. National Library of Medicine 2014.

[907] Will West and William West were both incarcerated at the Leavenworth Federal Prison in Kansas, they had the same name, measurements and, to their guards very similar facial features. The case is often cited as "dramatically demonstrating the superiority of fingerprinting over anthropometrics." Cole 2004: 71.

[908] Skinner [Accessed 5/5/15].

[909] See Tredoux December 2003; Galton 1892, 1893, 1895; Faulds 1880, 1894; Herschel 1880, 1894.

[910] TNA.PCOM7/248. Habitual Criminal: Report of the 1894 Departmental Committee. 1894–1895: 40.

[911] TNA PCOM7/248 (1894–95). *Habitual Criminal: Report of the 1894 Departmental Committee*.

offences under the Prev[ention] of Crimes Act and false pretences, were taken on their commitments, they would furnish a simple and positive proof of a pre[vious] Con[viction] if a prisoner were inclined to dispute it. Of course, this would not be done with prisoners who are to be measured and registered as habitual criminals, as in their case much more elaborate means of identification are to be provided."[912]

J. B. Manning, Pentonville's governor, supervised the experiment. He felt that fingerprinting would cause a lot of extra work for the reception officers at the prison and would probably require the employment of extra staff and considerable cost "without any commensurate advantage", particularly if fingerprinting were to be considered the primary identifier. He thought fingerprinting was only be worthwhile if two people had almost identical appearances, other identifiers being more helpful.[913] Between August and December 1895 eighty-six prisoners were received at Pentonville and eighty-one had data collected from them. The governor believed this was an exercise in futility.[914]

As well as these well-known systems, local initiatives were developed to reduce repeat offences. In Wakefield a new system called "Modus Operandi" was created.[915] This was a 'scientific' method for identifying, criminals based on characteristic traits in the crimes they committed rather than the individual. Using forensic evidence and photography both of criminals and crime scenes Modus Operandi classified distinctive characteristics of specific types and incidents of crimes. Users of the system could then identify crimes which shared characteristics, and possibly the perpetrator, or a profile of likely candidates.[916] This was an important advancement in criminal studies and forensic science which drew on the work of earlier researchers, such as Clarke. In 1908 Major L.W. Atcherley became Chief Constable of the West Riding and introduced the "Modus Operandi Crime Classification Department" to Wakefield's Police Headquarters. For the police it refers to the methods of preparation as well as the action of committing a crime.[917] Atcherley's system and information soon became popular in the surrounding area earning the office the title "the Clearing House of the North."[918] In 1913, after Atcherley published

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[912] As quoted in original. TNA HO144/191/A46508E. (20 June 1895). *Prisons and Prisoners-(4) Other: Experiment of taking finger prints of all prisoners received at Pentonville.*

[913] TNA HO144/191/A46508E (August 1895). *Prisons and Prisoners-(4) Other: Experiment of taking finger prints of all prisoners received at Pentonville.*

[914] TNA HO144/191/A46508E (June 1896). *Prisons and Prisoners-(4) Other: Experiment of taking finger prints of all prisoners received at Pentonville.*

[915] Modus Operandi is taken from Latin and means mode or method of operation.

[916] Hebenton and Thomson 1993: 21.

[917] Berg 1993: 145.

[918] Hebenton and Thomson 1993: 21.

his book *M.O.,* the Home Office approached him to discuss his system. Information discussed at this meeting was combined with a report from the *Chief Constables' Club* to create a system of "clearing houses" consisting of Scotland Yard (central and southern England) and Birmingham (midlands), while Wakefield continued to cover the north. These new offices were co-ordinated by the new "Central Criminal Record Office."[919]

How records and photographs should be made, kept and used changed over the nineteenth century, becoming more prescriptive, standardised and useful from the 1860s. Local and convict prisons had different rules and individual PMOs found ways to use and supplement the data collected to make claims about the prisons, criminals, medicine and psychiatry. For some, like Clarke, the records collected provided banks of evidence for theories on the psychiatry and the criminal classes, and could relate to phrenology and physiology as explanations for character. Those interested in criminality could look at the effects of physical influences on the body and mind such as diet, alcohol and labour. Data, statistics and photographs were collected not just because it was required by law but because they could be used by medical men to understand, explain and control Britain's criminal population.

The Bertillon system, finger printing, and to a lesser extent Modius Operandi, still used the labour of prison staff and drew on their previous research and techniques. These systems drew on data already collected by prisons and observations made by medical officers. The prisons were just one cog in the justice system, but the part that was supposed to do the most reforming work, hopefully rendering habitual criminal registers and the later British-Bertillon system unnecessary. The separate system and hard-labour, combined with religious teaching and newly taught skills, were intended to reform the convict for the labour market. Theories of "the criminal" emerged in the prisons. Their theories but were uniquely British, driven by necessity and observation. The Gladstone Committee in 1895, and its predecessors, created British systems of criminal identification to reduce crime rates and particularly to catch and deter repeat offenders. By creating these new identification systems based on biometrics and data new categories of criminals were formed, adding to the extensive list which emerged in the prisons in the experimental era. By the end of the century the experimental nature of the prisons was reduced in favour of centralised management, but the work that had been done continued to inspire experimentation, some of which was trialled in the prisons.

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[919] *Ibid*: 21.

VI. Conclusion: Medical Research in Wakefield Prison

In 1876 when Clarke joined Wakefield the prisons and their medical service were being consolidated, nationalisation would follow in 1877.[920] Clarke was based in a region where the visiting justices allowed or even promoted scientific endeavour. Consequently, Wakefield was an interesting provincial centre for scientific medicine, and in particular brain research facilitated at the nearby West-Riding Lunatic Asylum. Wakefield, unlike the other prisons in this thesis, was part convict prison, part local prison so does not represent a "new" type of prison in the chronology of prison development. Wakefield was, however, a place where the prison experiment continued within an institution that was transformed into a convict prison in the 1840s following the Pentonville model. A model which was supposed to limit experimentation to Pentonville. As has been shown in this thesis, new and varied convict prisons had to be built to manage new types of convicts. In the case of Wakefield, it was for "ordinary" convicts from the North of England but nevertheless proved an interesting experimental ground for medicine in the late 1870s and early 1880s. The experimental era did come to an end in the 1880s however. Nationalisation meant the scope independent research petered out by the mid-1880s as new restrictions were enforced by the HO.

Wakefield shows that provincial convict wards could be places for medico-scientific research as well as the development of new sciences of crime and data collection and interpretation. Historians need to pay more attention to these types of institutions and what the can tell us about history of science, medicine, and sciences of criminality in the nineteenth century. The men working in them contributed to contemporary knowledge as well as the development of prisons. During the early years of his career as a PMO, Clarke contributed and could be considered fundamental to the formation of criminal pathology as a field of study, although he never self-identified in that way. His focus was on scientific medicine not defining the criminal type or tracing hereditary criminality. He did not argue for born criminals and did not believe in atavistic throw-back theories or degeneracy. Instead of focusing on physiology and the face of an individual, Clarke sought as far as

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[920] The legislation to nationalise the local prisons came into force 18 February 1878. The nationalisation programme was intended to remove the discrepancies in punishment, diet and living conditions which had emerged across the local gaols. A new set of rules for PMOs carefully outlined what had to be done, who had to be examined when, and who it had to be reported to. Those already working in the convict prisons, or local prisons with convict wards like Wakefield, were already used to reporting to the governors and local commissioners, although the rules did limit the experimental nature of medical treatment. See McConville 1995 for the impact on local prisons.

possible to use pathology and statistics to explain people rather than individual criminals or even a criminal type. His research contributed to understanding the impacts of seclusion on bodily health adding in a scientific manner to the body of literature on how prisons should be run. More specifically he added to the growing fields of psychiatry and neuroscience through his observations, statistical analysis and post-mortems of the brain. The work he did with Bevan-Lewis was a fundamental discovery for histology and understanding of the brains' structure. Clarke could be considered the most innovative and scientific PMO in this thesis. He joined the PMS at the end of the experimental era and was able to make use of the connections in his new home city, and the consistencies and health policies already integrated into the convict prisons by PMOs who came before him. Using the prisons and local asylum as a laboratory space, Clarke made discoveries which would impact on neurology and criminology for years to come.

The work Clarke and others like him did to improve data collection in prisons also needs to be noted by historians of crime. The PMOs and wardens developed new techniques to manage populations within the prisons, and convicts when they left the prisons. The data they collected impacted on their own medical and criminological research but also impacted on criminal sentencing and policing. Repeat offenders received additional punishments for their crimes in an attempt to control the habitual criminal population. A category which emerged from the prison classificatory systems. The police used prison records and adapted their data collecting techniques to create new databases of criminals to improve policing. After the experimental era in prisons the police took over finding experimental ways to identify convicts but still relied on prison data when developing new techniques for policing and for forensics.

Conclusion.
Managing Convicts, Understanding Criminals

The efficiency of the medical service has a very important relation to those who are deprived of their liberty, and thereby prevented from exercising their discretion in the preservation of health.[921]

I. Introduction: Medicine and the Making of the Prison Medical Service

This thesis has shown that PMOs and their medical research significantly impacted on the development of convict prisons in nineteenth-century England. Management plans, architecture, penal policies, and philosophy in convict prisons changed in response to PMOs' work. Convicts' health meant the quest for a system of uniform prisons had to be abandoned, so new types of convict prisons were created to deal with specific health problems. The new types of prisons were based on the new categories of criminal which emerged in the nineteenth century, categories which were created primarily for practical purposes by medical men. The failure of the prisons to reform convicts was partially blamed on the physical and mental health of the prison population. This was explained "scientifically" through the creation of new categories of criminals by PMOs. These categories closely mapped onto the new prisons created for different types of people (age, gender, number of offences, illness, physical disabilities, mental disabilities, etc.). The impact of PMOs attempts to improve health and manage criminals has been neglected by historians in favour of more theoretical "criminology". But, there was a circular relationship between prison medicine, decisions made in prisons and the British categorisation and understanding of criminals.

Utilising archival materials such as letters, memorand, prison records and photographs in addition to the published works of PMOs this thesis has used a case study approach and hitherto under-used sources to broaden current understanding of England's PMOs. By searching for sources beyond parliamentary papers - the traditional source for research

[921] Anon 1887: 473.

into the prison system - this thesis has given new and exciting insights into the day to day concerns of prison staff, medical and psychiatric practice and research, and the sciences of criminality. These alternative sources reveal the interests and intentions of PMOs, as well as how their work affected the opening of new prisons and their development. Moving away from the directors' reports and legislation passed relating to prisons shows that the process was less polished, planned and uniform than might otherwise seem to be the case. It shows that the convict prisons were developed through a complex medically and ideologically guided series of experiments which achieved mixed success.

In this conclusion I summarise and evaluate my findings concerning the relationships between prisons, prison medicine, and the categorising and understanding of criminals. Section II further explores the relationship between medicine and the prison service. In this thesis I have argued that historians need to re-evaluate how prison medicine impacted not only on the health of convicts but on the architecture, management and philosophy which underpinned the Victorian prison system, which survived largely intact into the twentieth and twenty-first centuries. Section III then turns to what PMOs were doing on a day to day basis. It is clear that the men of the PMS had to tread a careful line between preserving discipline and protecting health. Furthermore, it is clear that the work PMOs did had consequences which went wider than the prison they worked in. Historians of medicine need to be more aware of the impact men in state institutions had on medical and psychiatric research and practice. Finally, section IV considers the separation of criminals into different groups, which this thesis has shown were created to tackle health problems and perceived moral inconsistencies in the prison system. Each new category of criminal required a new variation of convict prison. The complex web of convict prisons resulted in a system far removed from the uniform plan; this inherited system still challenges prison authorities today. The separation of criminals into categories shaped English understandings of the "criminal". New subdivisions were created to manage criminals inside and outside of the convict system. It will be further demonstrated that the categorisation of criminals influenced the science of criminality, which became criminology, as well as policing and forensic techniques. This thesis has shown that the role of prison medicine in all these areas has been severely underestimated and that its recognition offers significant dividends to historians in a number of fields.

II. Convict Prisons: A Complicated Experiment

Since the upsurge of interest in the 1970s, historians of English prisons have placed emphasise on a number of different things, including power (Foucault, Ignatieff, Priestly), suppression of deviance (Garland, Saunders), administration (McConville, McGowen), reform (Forsythe, McGowen, McConville).[922] Moreover, Foucauldian thought has dominated the literature; most historians have been either Foucauldian or responding to Foucault.[923] By adjusting the lens to focus on medicine and health we immediately complicate the picture. It becomes clear that lots of people, their motives, ideas, and actions impacted on the prisons development and variety. It becomes problematic to talk about "the prisons" without qualifiers and clarifications.[924] The diversity within the convict prisons is indicative of how varied and complex the whole penal system and all the different institutions, geographies, people involved here.

This thesis has sought to move beyond the prevailing focus on punishment and power in prisons by bringing medicine and health to the fore. The practical everyday tasks, concerns and questions asked by medical men shed light on how the convict prison system operated, why it developed as it did, and what the people involved were trying to achieve. Medicine was an integral part of the system and a necessary step towards the reform of the convicts' bodies and minds in order to make each individual a useful member of society. The chaplains hoped, to reform or even save their souls in the process. By focusing on specific prisons, I have highlighted that PMOs faced a range of concerns and challenges. Each chapter tells the story of a specific medical officer, the prison he worked in and his relationship to government policy, thereby highlighting some of the medical problems he tackled and how those in turn changed the prison system. The medical problems emphasised in several chapters were by no means restricted to that specific prison or medical officer. Nevertheless, each PMO discussed in this thesis contributed in significant ways to the development of English prisons as well as to medical research.

In the middle of the experimental era as punishment (including executions) moved behind closed doors, the prison authorities had to acknowledge the Benthamite prison plan was not enough. The results were the separation of children and women from men, diet and

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922 Webb and Webb 1922; Foucault 1978; Ignatieff 1978; Priestley 1999; Garland 1985; Saunders 1988; McConvillle 1981; McGowen 1995; Forsythe 1987; McGowen 1995; McConville 1995.

923 For example; McConville 1981; Garland 1985; Dobash *et al.* 1986; Sim 1990; Priestley 1999; Breathnach 2015

924 Morris and Rothman 1998: vii.

discipline changes (chapter 2), and new institutions like Woking and Broadmoor (chapter 3). Attempts were made to change the system from within, but also to understand criminals to stop them at the source, through the work of scientists of crime like Clarke (chapter 4), Francis Galton, Henry Faulds and the new police detectives. In this period, which has been characterised as the experimental era, all elements of the prison service had to be tried and tested and the consequences of these experimental policies changed English prisons. In opposition to much of the current historiography, I have shown that a standard or uniform prison service did not emerge.

In 1866 *Chambers's Journal* claimed that "the great convict question has been discussed in all its branches; the whole consideration of punishment, in all its aspects, has received every kind of attention—the attention of parliament, of royal commissions, of practical experimentalists, of theorists, or religious and scientific men, of literature and of the press."[925] As has been noted by others the new penal institutions created new professional positions.[926] In principle, all convict prisons were managed by their governor, who was overseen by the Prison Directors and ultimately the Chairmen of the Directors—Joshua Jebb (1842–63), Edmund Henderson (1863–1969) and Edmund Du Cane (1869–95). As it transpired, a web of people managed the convict prisons and experimented in them. Not everyone who worked there was vindictive, but they had a complex mixture of motives relating to morality, health, religion, economy, efficiency, reform, punishment and deterrent. The prison created a new governing body and saw the running of a number of commission and inquiry boards. It also provided new jobs for those leaving the military, either as governors for the higher classes or wardens for foot soldiers. The prison also had a new type of religious professional, the prison chaplain, who contributed to the spiritual life of the prison but, as Forsythe has shown, the chaplains were also integral to the reform processes.[927] More work needs to be done on the role of the prison chaplains in shaping the convict prisons. This thesis, however, has focused on the prison doctors were charged to oversee the health of the prison, tackled epidemics and advised on diet, while also quietly creating sciences of the criminals. By looking at the less obviously political men outside administration we get a much clearer picture of the complex issues being considered in shaping convict prisons.

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[925] Anon 1866b: 406.
[926] McConville 1981; Forsythe 1987; Priestley 1999.
[927] Forsythe 1987.

This thesis has drawn attention to some of the "practical experimentalists," "theorists" and "scientific men" mentioned in *Chambers's Journal,* and argues that all of those involved were by necessity concerned with medicine and health, no matter the scale of the decision being made, or whether they were medical men or not. I suggest that no decision, punitive, economic, religious, architectural, or administrative, could be made concerning the convict prisons without thinking about the consequences for health. Consequently, historians of prisons must be aware of what the medical men were doing, regardless of whether they are writing a medical history; prison doctors need to be seen as part of both medicine and the prison service. In particular, it is important to note that it was the PMOs who had the last word on punishments and the amount and type of hard labour a convict could do, giving them significant power.

It had been intended that Millbank Penitentiary would be built along Benthamite lines.[928] As this thesis has shown that did not happen and Millbank was something of a failure as a building and architectural plan. Nevertheless, from it came the designs for Pentonville, Britain's "model prison." The radial design used in this prison would reappear in a number of ways in different convict prisons, local prisons, workhouses and asylums. This thesis has shown that despite the quest for uniform architecture and a perfect solution to the criminal problem such uniformity was not achieved. I argue that the primary reason the architecture changed was not because of fashions or changes in building techniques but in an attempt to improve the health of convicts first and by extension to improve penal discipline and punishment.

Prison architecture, administration, staff, and management had to adapt as part of the prison experiment of the nineteenth century. Ignatieff and Scull stressed that quarantine and the segregation and supervision of criminals were central to the prisons as places of control.[929] The convict prisons created new categories of criminals as they separated them on medical grounds. The purpose of the prisons moved from reformatory to productive punishment prompted by a sense of failure and as theories about the irreparable degeneration of the population increasingly took hold. As with the asylums, the PMOs attempts to understand, diagnose and categorise their patients coincided with a sense of despair at the impossible task of "curing" the body and mind of these institutionalised populations. Various schemes were introduced to encourage good behaviour and achieve moral reform within the convict prisons. At the beginning of the nineteenth century, all

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[928] Although it was not conventionally utilitarian, as shown by Forsythe 1984 and Wiener 1995.
[929] Scull 1977; Ignatieff 1978.

criminals of any age, sex and class could be imprisoned together. The convict prisons quickly separated convicts by gender and by 1838 started to treat juveniles differently. Within the convict prisons more classificatory groups were introduced. These included casual and habitual criminals, and criminals identified by their disciplinary class (i.e. types of criminals), in addition to their social class.

Each convict prison, and the men that worked there, tells a different story Together, they demonstrate the experimental nature of creating the convict prison system. Although this is not a story about individual convict experience, it is a story about convicts; their bodies, minds and perceived characteristics. Criminals were subdivided and labelled; some criminals were labelled as convicts by the courts. Convicts were categorised by crime, punishment, time in prison, age, gender, physical and mental health. The categories a convict belonged to could change whilst they were undergoing a sentence, and this was affected by, and affected, the punishment, food and work they received. These were all practical categories, led predominately by health concerns. The numbers of convicts coming through, and the very nature of the convict prisons, meant that the majority of the time convicts were not perceived as individuals. They were defined by group depending on what ward of the prison they were in, what task they undertook as part of hard labour and what skills they had to contribute to prison life. We have already noted that convicts were quickly divided along lines of age and sex. The majority of convicts were adult males and there was an implicit assumption that the white, adult male body was the norm and other groups were variants upon the theme. Where the tradition of Foucauldian prison history emphasised the regimentation of prison discipline this study, with its focus on medicine and health, has shown that the prison experiment entailed the diversification of the system to reflect the diversity of inmates.

III. Prison Medical Officers: Medicine and Psychiatry in the Convict Prison Service

In this thesis I have argued that prisons, and other state institutions, were places for medical research. Focusing on those in convict prisons who were sentenced to spend at least three years of their lives within prison walls has made it apparent that at least some of the doctors in these places were not just instruments of discipline but active researchers

and practitioners in health and medicine.[930] Case studies have been used to show not only how important the everyday work and research of the PMOs was in creating the British prison system, but also how they contributed to medicine and psychiatry outside of their own institutions. I have argued that health was one of the key driving forces behind prison policy changes; to this end research and experiment were central. Prison medicine covered a huge range of disciplines and practices pertaining to the health of a specific population. In opposition to Sim and Priestley's Foucauldian views of prison medicine, this thesis has shown that PMOs were not mere bullies supporting the hierarchical structure.[931] Initially, the goal of the PMO was, on a very basic level, simply to maintain health and avoid epidemics. For some PMOs the role developed into improving health, often through diet and sanitation (chapters 1 and 2).[932] The management of air quality, cell cleanliness, exercise and clothing also fell under the PMO's jurisdiction, as by managing these elements it was thought illness and disease could be kept at bay, and consequently convicts kept healthy and alive. PMOs were also challenged with managing mental health and spotting malingerers. Some like Campbell (chapter 3) were obliged to do so by their position, while others like Clarke (chapter 4) chose to study the criminal and lunatic mind and brain to their own ends.

The idea of prison as a centre of punishment was challenged by the question of whether a convict should leave prison healthier than when they entered it, thereby giving them the best possible chance to be hardworking members of society upon their release, but also potentially encouraging paupers to seek "relief" in prisons.[933] By 1864 it was decided that the bare minimum of maintaining health was enough.[934] Health was often measured in terms of weight; a steady weight could be considered a health success. There were cases of people gaining weight, which concerned prison officials, who did not want prison to be a rewarding, or a perceived easy option compared to the outside world or the workhouse. They needed to maintain some resemblance of the less-eligibility principle where the convicts received less than the working poor, even though in reality this proved difficult

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[930] During Queen Victoria's reign over fifteen million people were received into the prisons of England. Some people experienced their local prison only prior to trial, and the majority of people convicted in the Victorian era were imprisoned in a local prison for less than a month after conviction (Priestley 1999: 52). All prisons saw a high turnover of inmates, and sentences of imprisonment based on a summary conviction rose steadily between 1857 and 1877, from 62,293 to 100,525 per annum; the number of fines imposed by magistrates in the same period increased from 143,463 to 358,053 (McConville 1981: 331see pp.331–7 for more statistics).

[931] Sim 1990; Priestley 1999.

[932] Priestley 1999: 171.

[933] Tomlinson 1978.

[934] Hardy 1995: 65.

is not impossible so was abandoned by prison authorities.[935] Prison architecture, management and philosophy were dictated by everyday concerns about health. The governor was charged with managing discipline, the chaplain with religion and the PMO with health. Together, these people, and their plans, had to be balanced. This sometimes forced the staff into positions of dual loyalty to their profession and to the prisons.

By exploring the work of specific individuals in specific places within the convict prisons of England, it becomes far clearer how medical concerns helped form, define and create the prison service which had emerged by the end of the nineteenth century. There is still much to be done, there was a whole network of convict prisons, local prisons, and convict work centres. More research is needed on women and children in convict prisons and in mixed-sex institutions; however, the source material often excludes them. Further work should be done on medical practice, particularly in relation to surgery, post-mortems and the medical treatment available to juveniles in prisons, but it is clear that medicine should be given serious consideration when thinking about the development of any of the important nineteenth-century institutions, the people that contributed to that development and the people who experienced them. The number of prisons means there is a huge potential pool to draw from, but source material, particularly doctors' notes, often does not survive.[936] The source material available increases from the 1870s, but this thesis is intended to address the early experimental period of convict prisons. Similar studies could be usefully conducted for Scotland, and arguably Wales, Northern Ireland and the British Empire. Jebb's vision for prisons spread across the globe, adjusted to suit the medical and moral needs of the convict populations. More locally, the relationship between asylums, workhouses and prisons needs further study. How did people and scientific and medical knowledge move between these institutions?

Through using case studies, it has been possible to look at the work of individual PMOs and how their work related to, and changed, their institution. Millbank Penitentiary (chapter 1) was the government's first attempt at a reformatory prison, where being incarcerated in the prison was explicitly part of the sentence for committing a crime. Drawing on Jeremy Bentham's panoptical design the architecture of Millbank reminded

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[935] Tomlinson 1978; Hardy 1995.

[936] I have found no written reason why these documents survive but I suspect that once the quarterly and annual reports were composed there day to day notes simply occupied space. Medical notes relating to an individual might have survived, but again probably became worthless once they had left the prison. We have more records after the 1870s when the system became more centralised and it was felt that all paperwork could be helpful in the fight against habitual offenders.

all of the power of God and the power of the law.[937] The physical structure of Millbank was almost an unmitigated disaster, causing epidemic disease outbreaks amongst the population and unintentionally allowing for communication between convicts, undermining the reform process. William Baly was appointed to reduce the spread of epidemic disease and improve sanitation at Millbank, which he did with some success through research and trial and error with sanitary measures. Small seemingly insignificant changes such as white-washing the walls made a difference. Of course, he did not completely solve the problem, but the health of prisoners was important to the survival of the prisons as a form of punishment.

Despite the architectural and medical problems of Millbank, the decision was made to design and build Pentonville, which opened in 1842 (chapter 2). When Joshua Jebb designed Pentonville he tried to correct the mistakes of Millbank and learnt from his experience at Parkhurst Juvenile Prison, which is not addressed fully in this thesis. Pentonville was meant to be perfect architecturally and was intended to embody the separate system which would, it was believed, punish and reform convicts. It was intended that Pentonville's healthy and scientific "model" design would be the basis of all subsequent prisons and the start of a uniform convict prison system.[938] For a short time, Pentonville was meant to be the only place where prison experiments took place. All other institutions would just apply the results.

As this thesis has shown, that was not the case. Experimentation continued at Pentonville and did inform other convict spaces, but the prisons had to diversify; new prison experiments were needed yet not all were built from scratch. For example, Brixton Prison, which has not been addressed in this detail in this these, had been a local prison before the Government bought it in 1853. It was completely redesigned to be like Pentonville but adapted for women. The PMO there, Lawrence Bradley, and his colleagues had to create a new version of the Pentonville model that was suitable for female sensibilities but also addressed women's health (specifically menstruation and childbirth) as well as mental illnesses which was considered to be more common among women. There was more space for association, different types of labour spaces and a greater emphasis on productivity than in the original Pentonville design, which employed treadwheels that were not attached to anything. The women in Brixton did laundry and other money-making tasks, marking

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[937] Brodie *et al.* 2002.
[938] See Jebb 1844.

a departure from the prevailing prison philosophy in the 1840s[939]. The other noticeable difference was an increased awareness of aesthetics, deemed important to treat feminine nature and restore fallen women. Architecturally, Brixton marked the next stage in convict prisons, where Pentonville's design was imposed upon other spaces and forced to adapt to changing penal philosophy.

It was noted within a few months of Pentonville opening that the separate system correlated with mental illness and increased suicide rates, but it the evidence was not considered conclusive enough to suspend the experiment. Woking Invalid Prison highlights the conflicts between health and punishment in the Victorian prisons. The prison directors wanted to punish and not certify insane convicts, while the Lunacy Commission wanted them all certified so that they would be protected by the lunacy laws. Extensive debate ensued: should mental or moral health win? In the end it was deemed more important to care for mental health. Nevertheless, the mental health of convicts remains a problem today. PMO Bruce Thomson estimated in 1870 that 12% of criminals had mental deficiencies (including imbecility, suicidal tendencies and epilepsy) and this grew as criminals were concentrated after the end of transportation.[940] By the 1860s the physically disabled and those with mental illnesses were being sent to the invalid convict prison as they were unable to perform hard labour in the convict prisons or the public works prisons.

In Woking Prison the emphasis was on keeping "invalids" healthy and sane enough to do some sort of work in order to fulfil their sentences. The building was designed to have greater hospital space and more association rooms to accommodate its inmates. It also drew on asylum design, and so had more open space and fresh air. When Woking opened in 1860 the effects of the prison system on the body and mind were not widely publicised by prison officials, but it was a generally acknowledged fact that a high proportion of criminals needed additional medical attention. The Penal Servitude Act (1864) and subsequent acts of legislation were part of the government's attempts to address ongoing fears that the prisons were ineffective at punishing and reforming criminals—fears which emerged even as the system was being developed.[941] The convict prisons were an experiment, and in the 1860s right in the middle of this experimental era, it seemed like

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939 Anon 1867: 7.

940 Thomson 1870–71: 333.

941 Penal Servitude Act 1864; Prisons Act 1865; Habitual Criminals Act 1869; Prevention of Crimes Act 1871; Convict Prisons Returns Act 1876; Prison Act 1877; Prevention of Crimes Act 1879; Penal Servitude Act 1891.

the prison system with its attempts to balance control, reform, identity and health, was failing, even while plans for its implementation were still on-going.

The convict prison in Wakefield (chapter 4) differed architecturally from the other prisons discussed in this thesis in that started as a local prison, the most common type of prison in Britain. In Wakefield, rooms were rented by the government to be turned into convict cells; the prison had to be adapted to fit government policy in these spaces. In the case of Wakefield, the local prison became like a convict prison before nationalisation in 1877, because the two halves shared a governor. Wakefield is a prime example of the partial adaptation of a prison space to fit with convict prison policy, health research and punitive philosophy. In each prison the building had to provide space for hard labour, separation and punishment, but it was more important that the building did not cause disease or insanity. Consequently, the physical architecture and interior designs of the prisons changed to improve health.

Crime, insanity and poverty were the fears of Victorian society, and were crystallised by the debate about degeneration in the later part of the nineteenth century.[942] The optimism which had come with the building on prisons and asylums in the early nineteenth century had all but dissolved to be replaced by degeneration theories.[943] Degeneration was not just used to explain differences in race but also crises in Europe. Crime, prostitution, suicide and alcoholism were all "social pathologies", which endangered the European race and European societies.[944] Calls were made for improvement of the policing and justice systems because of perceived increases in criminal activity, poverty, insanity and vice as well as injustices in the prisons themselves.[945] Poverty was said to present a "unique social problem", and there were campaigns to segregate the immoral sectors of the population from society before they became social problems. This effectively meant pre-emptively putting people in prisons, workhouses, and asylums. The plan was never implemented.[946]

The initial division between convicts and local criminals was not decided by prison staff, but by the courts. However, as has been shown, the categories created within the convict prisons were heavily influenced by PMOs. Throughout the period a healthy adult

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[942] Maudsley 1867; Chamberlin and Gillian 1985; Pick 1996; Saunders 1998; Waller 2001; Lawrence 2010.

[943] Saunders 1983: 305; Similarly as Scull argued in 1977 asylums had become "museums of madness" rather than institutions governed by a reforming ethos.

[944] Pick 1996: 21.

[945] See Bailey 1981.

[946] Saunders 1988: 274.

(probably white) male represented the norm in the prisons. The first separation made within government prisons began in the 1830s, when adults started to be separated from children, in one of the first recognitions that children were not simply small adults. A detailed study of Parkhurst Prison was beyond the scope of this thesis, but Parkhurst on the Isle of Wight was the first prison for juvenile boys, and the start of a new network of prisons and reformatories built up over the century to accommodate young people. PMOs encouraged this system, arguing that children were physically and mentally less able to manage hard labour and imprisonment. Psychologically, they believed young people were more susceptible to corruption from other criminals.[947] This rhetoric also applied to women, who were often infantilised by the prison system. The weaker-sex, it was felt by PMOs, were being physically and morally damaged by the hard labour regime.[948] Men and women were kept in different wards until women's prisons opened from 1853, although many women remained in mixed prisons. As this thesis has shown, people were not separated solely by their age or gender but, possibly more importantly to the prison authorities, by their ability to work. From the 1840s, selections were made amongst men as to who was healthy and who was not—those who could work and those who could not. PMOs feared malingering and they could be concerned not to over-diagnose. It was important for the convict, and for society, that individuals were punished.

Of course, not everyone in the prisons remained healthy and some people did die within the prison walls, from disease, old age or exhaustion. A systematic study of the (not executed) criminal body after death has not been undertaken.[949] No detailed records from individual convict prisons have been found about post-mortem practice within prison walls, or the potential removal of bodies to anatomy schools.[950] Sometimes the convict dead were buried within the prison grounds (as we know they were at Millbank), sent to anatomy schools or buried in Victoria Park Cemetery, though a few might have been buried by their family.[951] Although the archive sources have not survived, it seems likely that convicts were often dissected; Baly, Campbell and Clarke all made reference to post-mortems they had seen or performed. It seems fair to assume that convict bodies would

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[947] Shore 2002; Horn 2010; Johnston 2015.

[948] For more on women as weak/immoral: Walkowitz 1980; Bashford 2000; Marland 2004; Fauvel 2013. Women in prisons: Mayhew and Binny 1862; Smith 1962; Dobash et al 1986; Showalter 1987; Zedner 1991; Bosworth 2000; Davie 2010; Schwan 2014; Johnson 2015; Williams 2016a; Johnston *et al.* 2016. See Barton 2005 for discussion on Semi-penal institutions for women.

[949] Hurren 2016 discusses practices of dissecting criminal bodies in the early modern period.

[950] See Sim 1990: 32.

[951] Sim 1990: 33; Priestley 1985: 188.

have been used for medical purposes given that the convict body belonged to the state until their sentence had passed (and if they died, the sentence was considered never to have been completed).[952] After the 1832 Anatomy Act, unclaimed bodies from the workhouse were taken to the anatomy schools for dissection and convicts were considered to be below workhouse paupers on the social scale.[953] More work needs to be done on what happened to the convict body after death, as well as the medical lessons learnt from this practice. This is particularly interesting in the case of the brain: was the convict considered physically different because of their immorality and did this inform wider opinions on the human brain?

Through these case studies this thesis has characterised the period from c.1837 to 1886 as the experimental era for English prisons. It was a time when prison directors, governors and medical staff were exploring ways to create, develop, unify and perfect the new convict prisons. The work being done by the prison medical staff was both medical and scientific. It was intended to improve the effectiveness of the prison service and to improve health. It also contributed to the sciences of criminal. Substantial work was also done in architecture, public sanitation, statistics, biometrics and anthropometrics. New ways of measuring, categorising, treating, punishing and reforming convicts' bodies and minds were tried. This all seemed to have failed, as numbers of offenders and repeat offenders kept rising. It appeared that the prisons could do no more. The view emerged that there was something innately wrong, or criminal, in criminals.

That prison doctors not only supported the state prisons, but actively carried out research and changed prison policies has important implications for historians of medicine and shows that paying attention to civic institutions and the civil branches of medicine would pay dividends. The convict prisons are one prominent example, and there is still work to be done, in addition workhouses, charity hospitals, the police and coroners, and the county asylums would all repay further study. The doctors and surgeons who worked in these institutions were, I argue, a significant part of the medical community. Not having specific journals or professional societies relating to prison medicine did not exclude PMOs from a professional identity and if anything encouraged integration with orthodox medicine. If anything, not having a publication-based professional identity forced integration between doctors who were civil servants and the medical establishment. Additionally, many of the men who worked in prisons also held honorary posts at charitable hospitals or teaching

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[952] See prison cemetery records.
[953] Hurren 2012; Anon 1856c: 392.

hospitals thereby enabling them to further their shared knowledge with other men in the medical community. The role of the PMO was a new career path for doctors and surgeons that reflected the move by medical men more widely to professionalise their area of expertise. For example, the asylum doctors, the forensic specialists, and the legal-medical experts all established their professional position in this period.

By studying examples of prison medicine from the newly created PMS in detail it becomes apparent that the medicine practised in prisons was of a distinctive, experimental character, but those involved were also part of the larger medical community. From prison medicine emerged new ideas about the spread of disease, the impact of environment on the body, and definitions of mental health, as well as about morality. They interacted with people and research from other forms of medicine and psychiatry which needs to be taken into consideration when studying the history of medicine or psychiatry. People were practicing medicine in non-obvious institutions and were not limited by disciplinary boundaries. The PMOs in this thesis contributed to, research in epidemic control, sanitation, nutrition, exercise science, psychiatry, neurology, and histology. They were researchers, partly by necessity, since they could not send their patients elsewhere. Their research contributed to nineteenth century medical knowledge and how health was managed in state institutions across Britain.

IV. Sciences of Criminals: Multiple Classifications of Convicts

This study of the convict prisons has shown that historians need a more nuanced and less narrow understanding of what the emerging sciences of the criminal were like than that achieved by looking for the antecedents of "criminology". Historians of the nineteenth century have often seemed to imply that the sciences of the criminal were confined to an interest in the "born criminal" and some notion of deviance (probably biological) from the norm.[954] Stereotypes of the criminal classes certainly abounded; the criminal class was always other-ed, or separate from normal, respectable society. However, this thesis has shown that there were a range of ideas being proposed and debated concerning the causes of criminality. More importantly, new methods were developed to understand criminals,

[954] Rock 1985; Davie 2005; Rafter and Gibson 2006; Becker and Wetzell 2009; Rafter 2009; Gibson 2009; Hayward *et al.* 2010; Knepper and Ystehede 2013; Jalava *et al.* 2015. Mannheim? Godfrey et al.

although they were often lumped into one group, were also subcategorised, which in itself was a method for understanding criminality. In turn, these categories of understanding impacted on the prisons in which the criminals were housed.

Despite the sub-classification of criminals that happened in prisons (and the press), it was generally agreed that the majority of criminals belonged to the "criminal class", which sat below the working poor on the social hierarchy. The members of the criminal class shared common characteristics, which allowed for the study and taxonomy of convicts. This thesis has highlighted that there were many labels applied to criminals within the prison system. At the start of the century criminals were categorised by their punishment—those to be transported or fined, for instance. Once prisons were introduced, there were local prisoners and convicts, as well as surviving categories like "traitor." Historians of criminology should be aware that categories of criminal emerged from PMOs and policy makers in a bid to understand the criminal and explain the apparently failing-to-reform prison system. This may have formed part of what has been termed "scientific criminology" –meaning the scientific investigation, measurement, and categorisation of crime and the study of cases and their effects – but it was not a response to Lombroso.[955] Instead it was a concerted effort to draw on other sciences such as statistics and psychiatry, to solve a perceived failing in prison management and effectiveness.

For people working in the nineteenth-century justice system, "criminals" were not an amorphous group. By looking at PMOs we can start to correct errors in Lombrosian-dominated history of criminology, or so-called pre-criminology. It is clear that there was a unique British science of criminality in the nineteenth century, and this was in a large part led by prison research and the practical necessity to understand criminality in order to manage criminals with the penal system. I argue that British scientific understandings of criminality and crime were not influenced in the nineteenth century by Cesare Lombroso's criminal anthropology. The question raised is: if the Victorians were not doing Lombrosian studies, what were they doing? My conclusion, as this thesis shows, is that what many people were doing was very heavily practical. This holds particularly true for PMOs. By necessity, sub-categories were used in the management of those who had committed and been convicted of a crime, or crimes, rather than "criminals" being seen as a unified body. The Victorians were attempting to manage health in institutions. In this period, some of them adopted scientific approaches, almost all of which were

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[955] Godfrey *et al.* 2008: 13.

experimental. Some held on to what were often perceived as "outdated" beliefs, such as phrenology, but none of them were practising anything like Lombrosian criminal anthropology, and criminology was not a distinct discipline until the end of the nineteenth century. In Britain new types of convict—the casual, habitual and hereditary—emerged as attempts were made to define, understand and then reform the convict population.

As the thesis has shown, criminals were categorised within the prisons to help manage their punishments and their health. Extra categories were added to account for the apparent failure of the prison system to reduce crime. New medical and scientific research informed how convicts were viewed, both medically and morally. The labels of habitual and hereditary criminals were viewed as subcategories of the "hardened criminals": these criminals were the main concern for those involved in penal policy as the new, scientifically based prison system seemed to have no effect on these individuals. These criminals were likely to contaminate other people, particularly juveniles, with criminality. The growing numbers of habitual criminals and the moral risks they posed led to the 1869 Habitual Criminal Act and 1871 Prevention of Crimes Act. PMO John Campbell indicated how challenging these criminals were to the system when he wrote, "The indifference shown by some of the habitual or frequently convicted prisoners, on their return to prison, is a sad spectacle enough, as is the fact that our prisons are less dreaded by the older criminals than our workhouses, and the condition of pauperism looked upon as more discreditable than that of crime.[956]

"Hereditary criminal" was a flexible term sometimes used to describe habitual criminals; those who were believed to be educated in crime by parents or other locals, and a term occasionally used in an evolutionary/degeneration sense, to indicate that an offender was biologically inclined to commit crime. It was often acknowledged that crime ran in families, but whether this was because crime was inherited biologically or developed progressively in an individual through environmental conditioning was open for debate.[957] For most, "hereditary" simply meant that it ran in families. Historians have often interpreted "hereditary criminal" as being strongly Darwinian. It is this Darwinian understanding which has shaped much of the literature on early criminology. The literature has predominantly focused on theories of crime and criminals. The narrative is dominated

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[956] Campbell 1884: 52.
[957] Jalava *et al.* 2015: 36; Anon 1868c: 489.

by Lombroso, but the likes of Cesare Beccaria, Émile Durkheim, Francis Galton, Henry Maudsley, and Charles Goring also appear.[958].

This thesis argues that it was the PMOs who shaped British sciences of criminality and formed the basis of what would become criminology. The categories, statistics and knowledge they created came about because of practical problems and apparent failures in the convict prison system. By the mid-1880s completely new categories of criminals had emerged—convict and local prisoners, men, women, and children, sane/insane, healthy/unhealthy, casual, habitual and hereditary. These new categories and concepts were invented in the convict prisons between the 1830s and 1880s and continued to impact on how criminals were understood after that period. The knowledge and categorisation of criminals also impacted on policing and on criminal sentencing in the nineteenth and twentieth centuries. These aspects of the sciences of the criminal in the nineteenth century warrant further study, freed from the narrow expectations imposed by the Lombrosian conception of criminology that has dominated previous histories.

V. Conclusion: Prison Medical Officers and British Convict Prisons, Medicine, and Sciences of Crime

This thesis began with quotations from the early twentieth century, praising the success and scientific rigour of the English prison system as perceived by an American sociologist. For the Victorians though, the system was not as successful as they had hoped. Nevertheless, they did create a new type of penal institution which punished convicts, although many thought it was less successful at reforming or deterring them. This thesis has been an experiment in choosing to deprioritize government reports and look at prisons instead through a medical lens. By using underutilised sources, many of which are unpublished, this thesis brings a new perspective to bear on our understanding of how the English convict prisons developed in the nineteenth century.

By looking at convict prisons with a focus on medical practice it has become evident that health, medicine and the men charged with managing them were important factors in the development of English convict prisons. New forms of architecture, management, administration and labour were introduced. Everyday things like diet, clothes, bedding,

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[958] Jeffery 1960; Mannheim 1960; Jayewardene 1963; Fitzgerald *et al.* 1980; Garland 1988; Rock 1988; Rafter 1997, 2009; Becker and Wetzell 2006; Bowling and Ross 2006; Gibson 2009; Hayward 2010; Shoham 2010.

ventilation and the dimensions of a room were changed because of prison medicine. The prison authorities new-found concern about convict health helped to shape the English prison system and created new, unexpected prison experiments: it was the day-to-day practical tasks of prison staff that moulded theories and impacted on policies relating to the collective body of criminals. These everyday tasks and research projects meant that prison medicine was not on the fringe of medicine, but an active and influential component of medical research. All of this was part of a nineteenth-century experiment aimed at punishing and reforming individuals within the walls of the new institution, the convict prison.

This study has also provided further evidence of the significant value to historians of medicine and psychiatry of examining people working outside the hospital or asylum. The PMOs working in convict institutions not only contributed to the development of prisons and of prion medicine but also to general practice and public health. Similarly, historians of crime and criminology would benefit from studying the staff of British prisons. Many of the techniques developed to record data about criminals came from the convict prison service, as did much of the language and categorisation of criminals. The sciences of criminality developed in prisons were not theoretical conjectures but tools to manage a confined population of people. The modern understanding of “the criminal” as presented in the media and often in casual conversation originates from over a century ago, as do many of the techniques the police use to profile criminals and suspected criminals. Although there was no inevitability that prisons would develop in this manner, our current penal system has ultimately developed because of the decisions made by the government, prison staff, and most importantly the PMOs in the prison experimental era.

Appendix 1.

Chronology of Key People, Places and Policies

Key

Places

Acts and Committees

Individuals

1774	The Health of Prisoners Act allowed for medical intervention if health was being threatened during imprisonment and provided cleaning provisions for clothes and bodies, improved ventilation, created sick rooms and began the practise of white-washing walls.
1775	North America stopped taking convicts which forced Britain to find alternative punishments for un-transported convicts. The "temporary" solution was imprisonment in hulks.
1777	Penal reformer John Howard published a critical report on Britain's gaols.
1779	The Penitentiary Act specified that new gaols had to have separate cells for prisoners, enforce labour and provide religious instruction.
1780	Sir George Onesiphorus Paul built a new prison in Gloucester. It was secure, well-built and separated men, women and children. Prisoners wore uniforms, were taught to read and write, and were reasonably fed and cared for if ill. Other towns soon followed.
1785	Convicts were sent to Australia from 1785 but the "temporary" hulks continued to be used.
1791	Jeremy Bentham proposed his panopticon design for prisons.
1800	James Hadfield attempted to assassinate King George III but was found insane and thus not guilty of treason. His lawyer successfully argued that insanity included delusions rather than total "loss to all sense" as the law previously demanded.

1815 Gaolers in local prisons were to be paid so prisoners no longer had to pay or work for their keep.

1816 Bethlem Asylum relocated and the government negotiated two wings, known as the State Criminal Lunatic Asylum, for insane criminals.

1816 Elizabeth Fry began working with women at Newgate Prison and called for reform. She believed loss of freedom was punishment enough without additional hardships being inflicted.

1816 Millbank Penitentiary partially opened in London as the first convict prison and a (compromised) trial run of Jeremey Bentham's panopticon design.

1821 Millbank Penitentiary was completed.

1822 An outbreak of dysentery at Millbank was so severe that almost all the women were released from prison and the men transferred to hulks.

1823 From 1823 female prisoners were to be supervised by female warders.

1829 Eastern-State Penitentiary opened in Philadelphia, USA. This was the first-time solitary confinement, known as the "Pennsylvania System" was tried.

1829 The Metropolitan Police Force was established.

1832 The Anatomy Act meant unclaimed bodies in addition to executed criminals could be used for anatomical study.

1834 The Poor Laws stopped money going to the poor except in exceptional situations, instead the poor had to go to the workhouse for relief, probably contributing to rising crime rates.

1835 The Gaols Act introduced inspection of prisons.

1838 Parkhurst became a convict prison for boys. This was one of the first instances of young people being identified as distinct from adults.

1839 William Baly started at Millbank Penitentiary after advising on an outbreak of dysentery.

1842 In February 1842 Edwin Chadwick published his best-seller the *Report on the Sanitary Condition of the Labouring Population of Great Britain*.

1842 The Pentonville Prison Act was passed giving royal assent to Pentonville in June 1842. Making Pentonville the only prison with its own act of Parliament. Pentonville opened on 21 December as the new "model prison" replacing Millbank as the national prison.

1842 Millbank became a convict depot for transportees going to Australia, Gibraltar and Bermuda.

1842 Charles Bradley joined the PMS at Pentonville alongside George Rees.

1843 The M'Naghten Rules were introduced after the acquittal of Daniel M'Naghten on the grounds of insanity after he shot Edward Dummond. To be found insane it had to be proved the defendant did not know right from wrong when they committed a crime.

1843 Dietary codes were introduced to prisons.

1844 In January 1844 a "successful" diet was introduced by George Rees to Pentonville providing the "scientific minimum" without being hazardous to health and weight.

1844 Joshua Jebb became Surveyor-General of Prisons and Inspector-General of Military Prisons.

1845 Lunacy Act following the Metropolitan Commission of Lunacy. The Act formed the Lunacy Commission which oversaw the care of lunatics and later obliged boroughs and counties to provide pauper asylums.

1845 New wings were added to the local prison in Wakefield between 1845 and 1847, cells were rented by government to hold convicts.

1845 William Baly published *On the mortality in prisons and the diseases most frequently fated to prisoners.*

1846 The Nuisances Removal and Diseases Prevention Act was passed, and nicknamed "The Cholera Bill".

1847 The Juvenile Offences Act meant that young people (under fourteen) should be tried in petty sessions, not an adult court, for larceny under five shillings.

1848 Portland opened as a public works convict prison.

1848 The first Public Health Act responded to Edwin Chadwick's 1842 book and created a General Board of Health. This was ineffectual and underfunded but opened the doors to Local Boards of Health.

1848 Charles Bradley became chief medical officer at Pentonville.

1848 Suggested in the Commons that the separate system be relaxed, particularly for un-convicted persons in prisons.

1850 The Act for the Better Government of Convict Prisons meant full-time dedicated medical staff began to be employed.

1850 Portsmouth Convict Prison opened

1850 Cold Bath Fields became a men only prison after being extended and remodelled. It was used for London criminals on short sentences.

1850 Dartmoor opened as a public works site, in an attempt to move convicts out of prisons and employ them as useful labour.

1850 The Grey Committee advised that the Pentonville model be adopted across the country to bring uniformity to prisons and prison discipline.

1850 Juvenile Offenders Act changed the age of being a young offender from under fourteen to under sixteen.

1852 Dartmoor became 50% invalid prison in an attempt to reorganise the healthcare for convicts.

1853 Brixton Prison became the first all-women's convict prison in Britain with James Rendle as its PMO.

1853 Officially the end of transportation for women after, in 1852, Van Diemen's Land (now Tasmania) refused to take any more female convicts. Some women continued to be transported to Gibraltar but the majority stayed in Britain.

1853 The Transportation and Penal Servitude Act theoretically stopped transportation, with exceptions for those sentenced for over fourteen years or for life in penal servitude.

1854 The Youthful Offenders Act was the result of work by Mary Carpenter and Matthew Devonport Hill and allowed under-sixteens to be sent to reformatories instead of, or after, a prison sentence.

1854 William Baly and William Gull's *Reports on Epidemic Cholera* was published.

1855 The Criminal Justice Act stated all cases of simple larceny be tried in the petty sessions court.

1856 Chatham Prison opened.

1856 Millbank Penitentiary stopped being a convict depot for transportation and became a convict prison again.

1857 The Industrial Schools Act aimed to institutionalise vagrant children before they committed a crime.

1857 The last of the Hulks was burnt and convicts were all housed in prisons on the mainland.

1857 The Transportation and Penal Servitude Act was amended, ending transportation officially, include for those with long sentences. The colonies were no longer willing to accept convicts.

1859 William Baly was appointed Physician Extraordinaire to Queen Victoria. William Guy was appointed to replace him. He would lead a number of investigations into prison diet.

1859 Charles Darwin's *Origin of the Species* which would impact on how criminals were understood, redefining their behaviour in evolutionary terms.

1859 The London Sewage System started to be built.

1860 Woking Invalid Prison opened marking the decision to provide different medical care and punishment for those with long term illnesses, physical disabilities and mental illnesses. John Campbell was appointed as chief PMO.

1861 Capital offences were reduced to just murder and treason, substantially reducing the number of hangings in Britain.

1861 Private individuals could declare bankruptcy thus avoiding imprisonment for debt.

1862 The Discharged Prisoners Aid Act gave released inmates a small sum of money to begin a new life in an attempt to integrate convicts back into society.

1862 Henry Mayhew and John Binny published *The Criminal Prisons of London and Scenes of London Life.*

1863 Broadmoor Criminal Lunatic Asylum opened.

1863 *A Prison Matron*, actually journalist Fredrick William Robinson, drew attention to convict lives though *A Female Life in Prison.*

1863 Edmund Du Cane was appointed as Director of Convict Prisons, primarily overseeing public works.

1863 Garrotters Act reintroduced corporal punishment for armed or violent robbery and harsh punishments for repeat offenders.

1863 Edward Smith was appointed by the BAAS to examine prison diet, and the effects of the treadmill on the body.

1863 Edmund Henderson succeeded Joshua Jebb after his sudden death as Chairman of Directors and Surveyor-General of Prisons and Inspector-General of Military Prisons on 29 July 1863.

1863 A Royal Commission set up by the Home Secretary reported to the House of Commons on prison discipline. They worked alongside the Carnarvon Committee who reported to the House of Lords. The investigations included Select Committees to review prison diet.

1864 A second branch of the Select Committee was appointed. William Guy, Lawrence Bradley and James Rendle contributed to the report. The subsequent diet plan was used in all convict prisons until 1898 with minimal changes.

1864 Parliament passed the Penal Servitude Act, which made the police supervision of ticket-of-leave men mandatory, and increased the length of penal servitude.

1864 Parkhurst ceased to take juvenile convict boys and became a women's prison.

1864 The Contagious Diseases Act allowed police in certain districts to arrest women suspected of prostitution and examine them for venereal diseases.

If found infected the women were forcibly sent to lock hospitals for treatment.

1865 The Prison Act was the "major consolidator of nineteenth-century prison law, formally amalgamated the jail and the house of correction" it also laid down government rules for the running of prisons, wanting them to be "austere and vexatious."[959]

1866 James Creighton Browne began working at the West Riding Lunatic Asylum, he would work there for ten years making it a renowned research centre.

1868 Capital Punishment (Amendment) Act ended public hangings. Michael Barrett was the last man to be publically hanged on 26 May following his involvement in a bombing in Ireland which killed twelve bystanders and injured many more.

1869 Habitual Criminal Act was the first legislative move to deal with a specific class or type of criminal and also the first to allow different treatment of different groups of criminal.

1869 The final batch of convicts was sent to Australia, before the absolute end of transportation from Britain, despite the 1857 Transport and Penal Servitude Act.

1869 Brixton Prison ceased to be exclusively for women.

1869 Edmund Du Cane took over as Surveyor-General of Prisons and Inspector-General of Military Prisons from Edmund Henderson and became Chairman of the Board of Directors of Convict Prisons.

1869 Imprisonment for debt was abolished apart from fraud and refusal to pay.

c.1870/1 Charles Bradley left Pentonville.

1870s A series of Education Acts made schooling compulsory, taking children off the streets and reducing the number of young offenders.

1871 Prevention of Crimes Act tidied up problems from the 1869 Habitual Criminals Act. The courts now had the ability to decide on the level of

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[959] McConville 1981: 349.

supervision and surveillance a released convict needed. Prison registers and photography made compulsory.

1871 "The Wing" was added to Woking Invalid Prison to separate the sane and the insane.

1872 A review of prison diet was called. William Guy was appointed to lead the Investigation, but having created the dietary plans in the first place he was not inclined to see flaws in it.

1874 The cases of Henry Balls and John Maloney highlighted that there was no plan for insane convicts at the end of their sentence, they were simply released because they were not certified to enter an asylum.

1874–1875 Outbreak of typhoid at Wakefield Prison.

1876 The Home Secretary Richard Ashton Cross was given permission to bring in the appropriate legislation to nationalise all prisons and manage them all like the convict prisons using the separate system.

1876 Cesare Lombroso's *Criminal Man* published in Italy

1876 Henry Clarke started at Wakefield Prison.

1877/8 Robert Gover appointed as Medical Inspector to Prisons following a stint as surgeon at Millbank.

1877 Officially all insane male convicts had to be moved to Woking Invalid Prison.

1877 The Prisons Act was passed to transfer direct control of local prisons to central government (the Home Office) and the Prison Commission headed by Du Cane.

1878 Henry Clark and William Bevan-Lewis published "The Cortical Lamination of the Motor Area of the Brain."

1878 On the 18 February the new Prison Act came into force making all prisons government prisons.

1880 John Campbell retired from Woking Invalid Prison.

1883 Until the 1883 when the Trial of Lunatics Acts was passed, if a defendant was found insane they were also found not guilty: the Act allowed for a "guilty but insane" verdict.

1884 John Campbell published his memoir *Thirty Years' Service of a Medical Officer in the English Convict Service.*

1884 William Bevan-Lewis became the director of the West Riding Lunatic Asylum.

1886 Woking Invalid Prison ceased to be a prison and became a military barracks.

1890 Havelock Ellis published *The Criminal.*

1890 Millbank Prison closed and demolished after long term structural and sanitation problems made it uninhabitable.

1894/5 Chaired by Herbert Gladstone the Gladstone Committee published their *"Report of the Departmental Committee on Prisons"* recommending unproductive labour like the treadwheel be ended and labour be performed in association rather than separation. They also recommended that reformatories should take offenders up to 23 years of age and habitual offenders receive an additional 5–10 years on their sentence as a deterrent.

1895 Cesare Lombroso's *Female Offender* published in Italy.

1895 Edmund Du Cane retired.

1898 After much discussion many of the Gladstone Committee's recommendations were ignored or watered down as part of the Prison Act 1898. It was also the end of the dietary plans which had been proposed by William Guy and the Select Committee in 1864/1872.

1899 Cesare Lombroso *Le Crime; Causes et Remédes* published in Italy. (The English translation was not published until 1911).

1902 The treadwheel was banned.

1903 The first Borstal Prison opened in Borstal, Kent. Sir Evelyn Ruggles-Rise oversaw the construction following from the 1895 recommendations from the Gladstone Committee.

1903 Holloway became a women only prison.

1907 Most young offenders received probation and fines rather than imprisonment.

1908 Henry Clarke left Wakefield Prison.

1908 The Prevention of Crime Bill introduced a system of prison establishments for young offenders which became known as Borstals, named after the institution which had opened in 1902.

1909 Forced feeding was introduced by Herbert Gladstone for suffragettes on hunger strikes.

1911 Walter Scott introduced a severely edited and reduced version of Lomboroso's Criminal Anthropology to Britain.

1913 In April 1913, the Prisoners' Temporary Discharge on Ill-Health Act was passed. This allowed the temporary discharge of prisoners on hunger strike combined with their re-arrest later once they had recovered.

1913 Charles Buckman Goring published *The English Convict: A Statistical Study* which was a statistical and biometric study of criminals. He saw criminals as having defective physique which was visible in their biometric data and mental capacity.

1922 Sidney and Beatrice Webb published *English Prisons Under Local Government* the first history of English prisons.

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